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INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS

BULLHEAD CITY, AZ

LAUGHLIN/BULLHEAD INTL ..... **RNAV (GPS) Rwy 16[1,2]**
RNAV (GPS) Rwy 34[3,4]
VOR/DME Rwy 34[1,5]

[1]NA when local weather not available.
[2]Categories A, B, 1200-2; Categories C, D, 1200-3.
[3]NA when control tower closed.
[4]Categories A, B, 1100-2; Categories C, D, 1100-3.
[5]Categories A, B, 2200-2; Categories C, D, 2200-3.

CARSON CITY, NV

CARSON ..... **RNAV (GPS)-A**
Categories A, B, 1700-2; Category C, 1700-3; Category D, 1800-3.
NA when local weather not available.

CEDAR CITY, UT

CEDAR CITY RGNL ..... **ILS Rwy 20**
VOR Rwy 20
Category D, 900-2¾.

DOUGLAS BISBEE, AZ

BISBEE DOUGLAS INTL ..... **VOR/DME or GPS Rwy 17**
VOR Rwy 17
NA when control zone not in effect.

ELKO, NV

ELKO RGNL..... **LDA/DME RWY 23[1]**
RNAV (GPS) Rwy 23[2]
VOR -A[3]
VOR/DME-B[4]

[1]Categories A,B, 900-2; Category C 1000-3; Category D, 1100-3.
[2]Categories A,B, 1400-2; Categories C,D, 1400-3.
[3]Categories A,B, 1500-2; Categories C,D, 1500-3.
[4]Categories A,B, 1200-2; Categories C,D, 1200-3.

NAME ALTERNATE MINIMUMS

FLAGSTAFF, AZ

FLAGSTAFF PULLIAM ..... **ILS or LOC/DME Rwy 21[1,2]**
VOR or GPS-A[3]

[1]NA when control tower closed.
[2]ILS, Categories B,C,D, 700-2.
[3]Category D, 800-2¼.

FORT HUACHUCA-SIERRA VISTA, AZ

SIERRA VISTA MUNI-LIBBY AAF ..... **ILS or LOC Rwy 26**
NDB Rwy 26
RNAV (GPS) Rwy 8[1]
VOR Rwy 26
NA when control tower closed.
[1]Categories A, B, 1300-2; Categories C, D, 1300-3.

GLENDALE, AZ

GLENDALE MUNI ..... **RNAV (GPS) Rwy 1**
NA when local weather not available.

GRAND CANYON, AZ

GRAND CANYON NATIONAL PARK ..... **ILS or LOC/DME Rwy 3**
NA when control tower closed.
Category D, 700-2.

VALLE ..... **VOR/DME Rwy 19**
NA except for operators with approved weather reporting service.

KANAB, UT

KANAB MUNI ..... **RNAV (GPS) Rwy 1**
Category B, 1100-2; Category C, 1400-3.

KINGMAN, AZ

KINGMAN ..... **RNAV (GPS) Rwy 3**
RNAV (GPS) Y Rwy 21
VOR/DME Rwy 21
Category D, 800-2¼.

NAME ALTERNATE MINIMUMS

LAKE HAVASU CITY, AZ

LAKE HAVASU CITY ..... **VOR/DME or GPS-A**
Categories A,B, 1000-2; Categories C, 1000-2¾; Category D, 1000-3.

LAS VEGAS, NV

HENDERSON EXECUTIVE ..... **RNAV (GPS)-B[1]**
VOR-C[2]
NA when local weather not available.
[1]Categories A,B, 1000-2; Category C, 1000-2¾.
[2]Categories A, B, 2400-2; Category C, 2400-3.

MC CARRAN INTL ..... **ILS or LOC Rwy 25L[1]**
ILS or LOC Rwy 25R[1]
ILS or LOC/DME Rwy 1L[2]
RNAV (GPS) Rwy 1R[3]
RNAV (GPS) Rwy 19L[45]
RNAV (GPS) Rwy 19R[45]
VOR/DME -A[2]
VOR Rwy 25L/R[3]
[1]ILS,LOC,Categories A,B, 900-2; Category C, 900-2½, Category D, 900-2¾, Category E, 1400-3.
[2]ILS,LOC,Categories A,B, 900-2; Category C, 900-2½.
[3]Categories A,B, 900-2; Category C, 900-2½, Category D, 900-2¾.
[4]Categories A,B, 900-2; Category C, 900-2¾; Category D, 900-3.
[5]NA when local weather not available.

NORTH LAS VEGAS ..... **ILS or LOC Rwy 12L**
NA when control tower closed.

LOVELOCK, NV

DERBY FIELD ..... **VOR or GPS-C[1]**
VOR/DME or GPS-A[2]
[1]Categories A,B, 1900-2; Categories C,D, 1900-3.
[2]Categories A,B, 900-2; Category C,900-2¾; Category D, 900-3.

MILFORD, UT

MILFORD MUNI/BEN AND JUDY BRISCOE FIELD ..... **VOR or GPS-A**
Category D, 800-2½.

OGDEN, UT

OGDEN-HINCKLEY ..... **ILS Or LOC Rwy 3[12]**
RNAV (GPS) Y Rwy 3
RNAV (GPS) Z Rwy 3
NA when local weather not available.
[1]ILS, Category D, 700-2.
[2]NA when control tower closed.

NAME ALTERNATE MINIMUMS

PHOENIX, AZ

PHOENIX DEER VALLEY ..... **RNAV (GPS)-B[12]**
RNAV (GPS)-C[3]
RNAV(GPS) Rwy 7R[4]
RNAV (GPS) Rwy 25L[14]
[1]NA when local weather not available.
[2]Categories A,B, 1000-2; Category C, 1000-2¾.
[3]Categories A,B, 1000-2; Category C, 1000-2¾; Category D, 1100-3.
[4]Categories A,B, 1000-2; Category C, 1000-2¾; Category D, 1000-3.

PHOENIX-MESA GATEWAY ..... **ILS or LOC Rwy 30C[12]**
RNAV (GPS) Rwy 30C[1]
RNAV (GPS) Rwy 30L[3]
VOR or TACAN Rwy 30C[1]
[1]NA when local weather not available.
[2]NA when control tower closed.
[3]Category E, 800-2¼.

PHOENIX SKY HARBOR INTL ..... **ILS or LOC Rwy 7R[1]**
ILS or LOC Rwy 7L[2]
ILS or LOC Rwy 8[3]
ILS or LOC Rwy 25L[2]
ILS or LOC Rwy 26[2]
RNAV (GPS) Y Rwy 7R[2]
RNAV (GPS) Y Rwy 7L[2]
RNAV (GPS) Y Rwy 8[4]
RNAV (GPS) Y Rwy 25L[2]
RNAV (GPS) Y Rwy 25R[2]
RNAV (GPS) Y Rwy 26[2]
[1]ILS, Categories A,B,C, 700-2; Category D, 800-2½. LOC, Category D, 800-2½.
[2]Category D, 800-2½.
[3]ILS, Categories A,B, 800-2; Category C, 800-2¼; Category D, 800-2½. LOC, Category C, 800-2¼; Category D, 800-2½.
[4]Category C, 800-2¼; Category D, 800-2½.

PRESCOTT, AZ

ERNEST A. LOVE FIELD .. **ILS/DME Rwy 21L[12]**
RNAV (GPS) Rwy 21L[4]
VOR Rwy 12[3]
[1]NA when control tower closed.
[2]ILS, Category C, 700-2; Category D, 900-3. LOC, Category D, 900-3.
[3]Category D, 900-3.
[4]Category D, 1000-3.

NAME ALTERNATE MINIMUMS

PRICE, UT

CARBON COUNTY RGNL/
BUCK DAVIS FIELD ..... **VOR/DME Rwy 36**
VOR Rwy 36[1]
Category C, 900-2½; Category D, 1100-3.
[1]Categories A, B, 2000-2; Categories C, D, 2000-3.

PROVO, UT

PROVO MUNI .. **ILS or LOC/DME Rwy 13,**700-2
Na when control tower closed.

RENO, NV

RENO/TAHOE INTL ..... **ILS Rwy 16R,** 2100-7[1]
ILS or LOC/DME Rwy 34L[2]
LOC Rwy 16R[3]
LOC/DME BC Rwy 34L[4]
RNAV (GPS) X Rwy 34L[5]
RNAV (GPS) X Rwy 34R[5]
RNAV (GPS) Y Rwy 16L[6]
RNAV (GPS) Y Rwy 16R[7]
RNAV (GPS) Y Rwy 34L[4]
RNAV (GPS) Y Rwy 34R[8]
RNAV (RNP) Z Rwy 16R, 800-2½
VOR-D, 1600-3
[1]LOC, NA.
[2]ILS,LOC, Categories A,B, 1000-2; Category C, 1000-2¾.
[3]Categories A,B, 1600-2; Categories C,D, 1600-3; Category E, 2400-3.
[4]Categories A,B, 1000-2; Categories C,D, 1000-3.
[5]Categories A,B, 1000-2; Category C, 1000-2¾; Category D, 1000-3.
[6]Categories A,B, 1400-2; Categories C,D, 1400-3.
[7]Categories A,B, 1800-2; Categories C,D, 1800-3.
[8]Categories A,B, 1000-2; Category C, 1000-2¾.

ST. GEORGE, UT

ST. GEORGE MUNI ..... **RNAV (GPS) Rwy 34[1]**
VOR or GPS-B,1300-2[2]
VOR-C,1800-3[2]
VOR/DME Rwy 34[23]
[1]Categories A,B 1100-2¼; Categories C,D, 1100-3.
[2]NA except for operators with approved weather reporting service.
[3]Category C, 800-2¼; Category D, 1000-3.

ST. JOHNS, AZ

ST. JOHNS
INDUSTRIAL AIRPARK ..... **RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32
VOR/DME-A
NA when local weather not available.

NAME ALTERNATE MINIMUMS

SCOTTSDALE, AZ

SCOTTSDALE ..... **RNAV (GPS)-D[1]**
RNAV (GPS)-E[1]
VOR or GPS-A[23]
VOR or GPS-C[24]
[1]NA when local weather not available.
[2]NA when Scottsdale altimeter not available.
[3]Categories A,B,C, 1100-3.
[4]Categories A,B, 900-2½;Category C, 900-2¾.

TONOPAH, NV

TONOPAH ..... **VOR or GPS-A**
Category D, 800-2¼.

TOOELE, UT

BOLINDER FIELD-
TOOELE VALLEY ..... **ILS or LOC/DME Rwy 17[1]**
RNAV (GPS) Rwy 17
NA when local weather not available.
[1]ILS, Category D, 700-2.

TUCSON, AZ

TUCSON INTL ..... **ILS or LOC Rwy 11L[1]**
LOC/DME BC Rwy 29R[2]
RNAV (GPS) Z Rwy 11L[2]
RNAV (GPS) Rwy 29R[2]
RNAV (GPS) Rwy 3[3]
RNAV (GPS) Rwy 29L[4]
RNAV (GPS) Z Rwy 29R[2]
VOR or TACAN Rwy 11L[2]
VOR/DME or TACAN Rwy 29R[2]
[1]ILS,LOC, Categories A,B, 900-2; Category C, 900-2¾; Category D, 900-3; Category E, 1100-3.
[2]Category E, 1100-3.
[3]Categories A,B,C,D, 800-2¼.
[4]Category D, 800-2¼.

WENDOVER, UT

WENDOVER ..... **VOR/DME-B[1]**
VOR/DME or TACAN Rwy 26[2]
[1]Categories A,B, 1700-2; Categories C,D,E, 1700-3.
[2]Category E, 800-2¾.

WINNEMUCCA, NV

WINNEMUCCA MUNI ..... **RNAV (GPS) Rwy 14[12]**
RNAV (GPS) Rwy 32[1]
VOR/DME Rwy 14[3]
[1]NA when local weather not available.
[2]Category C, 800-2¼; Category D, 800-2½.
[3]Category D, 1300-3.

WINDOW ROCK, AZ

WINDOW ROCK ..... **VOR/DME-A**
Categories A,B, 1100-2; Categories C,D, 1100-3.

DAVIS-MONTHAN AFB (KDMA), AZ (Tucson) (07242 USAF) ELEV **2704**

RADAR[1] - **(E)** 118.5 125.1 318.1 297.2

	RWY	GS/TCH/RPI	CAT	DH/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
PAR	30[2]	3.0°/59/1320	ABCDE	**2904**-½	200	(200-½)
	12[3]	3.0°/59/950	ABCDE	**2815**-¾	200	(200-¾)

[1]No NOTAM MP 1100-1300Z dly. PAR opr 1700-0300Z wkd or termination of A10 flying (contact scheduling for times at DSN 228-5777). [2]When ALS inop, increase vis ¼ mile. [3]NOT FOR CIVIL USE.

FALLON NAS (KNFL), (VAN VOORHIS FIELD), NV (03191 USN) ELEV **3934**

RADAR[1] - **(E)** 118.3x 121.875x 262.8x 275.6x 310.6x 345.2x

	RWY	GS/TCH/RPI	CAT	DH/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
PAR[2]	31L	3.5°/55/905	ABCDE	**4126**-¾	200	(200-¾)
	31R	3.5°/55/903	ABCDE	**4128**-¾	200	(200-¾)
	13L	3.0°/46/881	ABCDE	**4134**-¾	200	(200-¾)
	13R	3.0°/47/912	ABCDE	**4134**-¾	200	(200-¾)
	7	3.0°/36/679	ABCDE	**4129**-¾	200	(200-¾)
ASR[2]	31R		ABCDE	**4200**-1	272	(300-1)
	31L		ABCDE	**4200**-1	274	(300-1)
	13R		ABCD	**4260**-1	326	(400-1)
			E	**4260**-1¼	326	(400-1¼)
	13L		ABC	**4280**-1	346	(400-1)
			DE	**4280**-1¼	346	(400-1¼)
	7		AB	**4340**-1	411	(500-1)
			CD	**4340**-1¼	411	(500-1¼)
			E	**4340**-1½	411	(500-1½)
CIR	All Rwy		AB	**4400**-1	466	(500-1)
			C	**4400**-1½	466	(500-1½)
			D	**4520**-2	586	(600-2)
			E	**4980**-3	1046	(1100-3)

CAUTION: ATC Missed Approach Minimum Climb Rate

PAR/ASR	Rwy	Knots	60	120	180	240	300	360
	7[3]	FPM	300	600	900	1200	1500	1800
	13L/R[4]	FPM	250	500	750	1000	1250	1500
	31L/R[4]	FPM	270	540	810	1080	1350	1620

[1]No-NOTAM MP sked: PAR-2200-0000Z++ Thu, ASR-1500-1700Z++ Wed, when ceil-vis 3000-5 and above. [2]Descent to 5700' not authorized until inbound in initial segment within 10 NM of Rwy. [3]To 7500'. [4]To 7300'.

FORT HUACHUCA/SIERRA VISTA, AZ Amdt. 4A, OCT 22, 2009 (FAA) ELEV **4719**

SIERRA VISTA MUNI-LIBBY AAF

RADAR[1] - (E) 127.05 254.35 NA

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
PAR[2]	8		ABCDE	**4919**-¾	200	(200-¾)				
	26		ABCDE	**4829**-¾	200	(200-¾)				
ASR	26		ABC	**5000**-1	371	(400-1)	DE	**5000**-1¼	371	(400-1¼)
	8		AB	**5440**-1	721	(800-1)	C	**5440**-2	721	(800-2)
			D	**5440**-2¼	721	(800-2¼)	E	**5440**-2½	721	(800-2½)
CIR[3]	26		A	**5100**-1	381	(400-1)	B	**5180**-1	461	(500-2)
			C	**5180**-1½	461	(500-1½)	D	**5280**-2	561	(600-2)
			E	**5400**-2½	681	(700-2½)				
	8		AB	**5440**-1	721	(800-1)	C	**5440**-2	721	(800-2)
			D	**5440**-2¼	721	(800-2¼)	E	**5440**-2½	721	(800-2½)

[1]Opr 1500-2300Z Monday-Friday, except for holidays. [2]No NOTAM maintenance period 1500-1900Z on the first Thursday of the month. [3]Circling not authorized south of ruways 8 and 30.

YUMA MCAS/YUMA INTL (KNYL), AZ (09323 USN) ELEV **213**

RADAR - (E) 120.9x 124.15x 125.55x 125.95x 254.0x 270.8x 278.7x 286.0x 301.2x 305.2x

	RWY	GS/TCH/RPI	CAT	DH/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
PAR	3L	3.0°/54/1018	ABCDE	295-½	100	(100-½)
	21R[1]	3.0°/54/1067	ABCDE	393-½	200	(200-½)
PAR 3R			AB	520-1	332	(400-1)
SIDESTEP			C	520-1½	332	(400-1½)
			DE	520-2	332	(400-2)
PAR 21L SIDESTEP			ABC	600-1¾	393	(400-1¾)
			DE	600-2¼	393	(400-2¼)
PAR W/O GS 3L			ABCD	520-1	325	(400-1)
			E	520-1¼	325	(400-1¼)
PAR W/O GS 3R			AB	520-1	332	(400-1)
SIDESTEP			C	520-1½	332	(400-1½)
			DE	520-2	332	(400-2)
PAR W/O GS 21R[2]			AB	600-½	407	(400-½)
			CD	600-¾	407	(400-¾)
			E	600-1	407	(400-1)
PAR W/O GS 21L			ABC	600-1¾	393	(400-1¾)
SIDESTEP			DE	600-2¼	393	(400-2¼)
ASR	3L		ABC	540-1	345	(400-1)
			DE	540-1¼	345	(400-1¼)
	3R		AB	600-1	412	(400-1)
			CD	600-1¼	412	(400-1¼)
			E	600-1½	412	(400-1½)
	21L		ABC	600-1	393	(400-1)
			D	600-1¼	393	(400-1¼)
			E	600-1½	393	(400-1½)
	21R[3]		AB	620-½	427	(500-½)
			C	620-¾	427	(500-¾)
			DE	620-1	427	(500-1)
CIR[4]	ALL RWY		AB	700-1	487	(500-1)
			C	700-1½	487	(500-1½)
			D	780-2	567	(600-2)
			E	800-2	587	(600-2)

[1]When ALS inop, increase CAT ABCDE vis to ¾ mile. [2]When ALS inop, increase CAT AB vis to 1 mile, CAT CD to 1¼ miles, CAT E to 1½ miles. [3]When ALS inop, increase CAT AB vis to 1 mile, CAT C to 1¼ miles, CAT DE to 1½ miles. [4]When circling from PAR W/O GS Rwy 21R, increase CAT ABC vis to 1¾ miles, CAT DE to 2¼ miles.

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude , and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

BATTLE MOUNTAIN, NV

BATTLE MOUNTAIN (BAM)
AMDT 3 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3**, std. w/ a min climb of 282' per NM to 7300 or 4700-3 for climb in visual conditions. **Rwy 12,** std. w/ a min climb of 386' per NM to 7600 or 4700-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3,** climb heading 032° to 8200 before proceeding on course or climb in visual conditions to cross Battle Mountain Airport at or above 9100 before proceeding on course. **Rwy 12,** climb heading 122° and BAM R-076 to 10000 before proceeding on course or climb in visual conditions to cross Battle Mountain Airport at or above 9100 before proceeding on course. **Rwy 21,** climb direct BAM VORTAC and BAM R-205 to 10100 before proceeding on course. **Rwy 30,** climb heading 302° and BAM R-324 to 9100 before proceeding on course.

BEAVER, UT

BEAVER MUNI

TAKE-OFF MINIMUMS: **Rwys 7, 25,** NA-obstacles. **Rwys13, 31,** 2600-2¾ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 13, 31,** climb in visual conditions to cross Beaver Muni Airport Northwestbound at or above 8300 then climb to 10100 via MLF VORTAC R-102 to MLF VORTAC. Do not exceed 210 KIAS until established on MLF VORTAC R-102.

NAME TAKE-OFF MINIMUMS

BLANDING, UT

BLANDING MUNI

TAKE-OFF MINIMUMS: **Rwy 35**, 800-1 or std. with a min. climb of 350 feet per NM to 6700.

DEPARTURE PROCEDURE: **Rwy 17,** turn left. **Rwy 35**, turn right climb to 9000 via heading 090° and DVC R-223 to DVC VORTAC, then continue climb on course to MEA.

BRIGHAM CITY, UT

BRIGHAM CITY (BMC)
AMDT 5 09295 (FAA)

TAKE-OFF MINIMUMS: **Rwy 34,** std. w/ min. climb of 325' per NM to 5300 or 5100-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 16,** climbing right turn heading 205° and OGD R-331 to OGD VORTAC. **Rwy 34,** climbing left turn heading 205° and OGD R-331 to OGD VORTAC or for climb in visual conditions: cross Brigham City airport southbound at or above 9200 then via OGD R-351 to OGD VORTAC.

NOTE: **Rwy 16,** poles 266' from DER, 558' right of centerline, 30' AGL/4258' MSL.

BULLHEAD CITY, AZ

LAUGHLIN/BULLHEAD INTL (IFP)
AMDT 1 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwy 16,** std. w/ a min. climb of 370' per NM to 1800, or 1700-3 for climb in visual conditions. **Rwy 34,** std. w/ a min. climb of 495' per NM to 5500, or 1700-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 16,** climb via heading 164° and EED VORTAC R-334 to EED VORTAC, or for climb in visual conditions: cross Laughlin/Bullhead Intl airport at or above 2300, then continue climbing via heading 155° and EED VORTAC R-335 to EED VORTAC. **Rwy 34,** climb via heading 344° to 1600, then climbing right turn direct EED VORTAC, or for climb in visual conditions: cross Laughlin/Bullhead Intl airport at or above 2300, then continue climbing via heading 155° and EED VORTAC R-335 to EED VORTAC. **All Aircraft** climb in EED VORTAC holding pattern (East, right turn, 257° inbound) to cross EED VORTAC at or above MEA for direction of flight before proceeding on course.

NOTE: **Rwy 16,** multiple bushes beginning 3600' from DER, left of centerline, up to 12' AGL/1029' MSL. **Rwy 34,** multiple poles beginning 2211' from DER, right of centerline, up to 105' AGL/821' MSL.

CARSON CITY, NV

CARSON (CXP)
ORIG 08325 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27,** NA-obstacles.

DEPARTURE PROCEDURE: **Rwy 9,** use JIMPA DEPARTURE.

CASA GRANDE, AZ

CASA GRANDE MUNI

DEPARTURE PROCEDURE: **Rwy 5**, right turn. **Rwy 23**, climb direct TFD VORTAC. Continue climb in holding pattern (SW, right turn, 048° inbound) to MEA for direction of flight.

CEDAR CITY, UT

CEDAR CITY RGNL

TAKE-OFF MINIMUMS: **Rwy 8**, 3500-3 or std. with a min. climb of 450' per NM to 10000.

DEPARTURE PROCEDURE: **Rwys 20, 26**, turn right. **Rwys 2,8**, turn left, climb direct to CDC VOR/DME, continue climb to 9000 via R-348. Northbound continue on course. All others reverse course, climb to cross CDC VOR/DME at or above MCA for direction of flight.

CHANDLER, AZ

CHANDLER MUNI

DEPARTURE PROCEDURE: **Rwy 4R,** climbing left turn heading 220°. **Rwys 22L,22R,** climbing left turn heading 190°. **All Aircraft,** continue climb via TFD R-350 to TFD VORTAC.

NOTE: **Rwy 4L,** multiple towers and buildings beginning 69' from departure end of runway, 397' left of centerline, up to 80' AGL/1319' MSL.

CHANDLER, AZ (CON'T)

STELLAR AIRPARK

DEPARTURE PROCEDURE: **Rwy 17**, turn left, climb via heading 150°. **Rwy 35**, turn right. **All aircraft** climb via TFD R-350 direct TFD VORTAC.

NOTE: **Rwy 17,** tower and signs beginning 574' from departure end of runway, 183' right of centerline, up to 50' AGL/1124' MSL. Sign 611' from departure end of runway, 365' left of centerline, 42' AGL/1214' MSL.

COLORADO CITY, AZ

COLORADO CITY MUNI

TAKE-OFF MINIMUMS: **Rwy 2,** NA.

DEPARTURE PROCEDURE: **Rwy 11,** turn right. **Rwys 20, 29,** turn left. **All aircraft** climb to 7400 via the 160° bearing from AZC NDB then continue climb on course.

COOLIDGE, AZ

COOLIDGE MUNI

DEPARTURE PROCEDURE: **Rwys 5,35,** climbing left turn heading 280° to intercept TFD R-063, then via R-063 to TFD VORTAC before proceeding on course. **Rwy 17,** climbing right turn heading 240° to intercept TFD R-090, then via R-090 to TFD VORTAC before proceeding on course. **Rwy 23,** climb runway heading to intercept TFD R-090, then via R-090 to TFD VORTAC before proceeding on course.

DAVIS-MONTHAN AFB (KDMA)

TUCSON, AZ. 07186

Diverse departures not authorized, use published departure procedure for obstacle avoidance.

TAKE-OFF OBSTACLES: **Rwy 12**: Terrain 0' AGL/2707' MSL, 81' from DER, 500' left of centerline. Terrain 0' AGL/2707' MSL, 46' from DER, 512' left of centerline. Terrain 0' AGL/2707' MSL, 16' from DER, 500' left of centerline. Terrain 0' AGL/2706' MSL, 0' from DER, 200' left of centerline. **Rwy 30**: Terrain 0' AGL/2592' MSL, 0' from DER, 106' left of centerline. Terrain 0' AGL/2592' MSL, 7' from DER, 97' left of centerline. Terrain 0' AGL/2592' MSL, 0' from DER, 484' right of centerline. Terrain 0' AGL/2592' MSL, 13' from DER, 493' right of centerline. Vehicle 11' AGL/2615' MSL, 1017' from DER, 477' left of centerline. Terrain 0' AGL/2612' MSL, 237' from DER, 590' left of centerline.

DELTA, UT

DELTA MUNI

TAKE-OFF MINIMUMS: **Rwy 17,** std. with a min. climb of 412' per NM to 6600, or 1800-3 for climb in visual conditions. Climb in visual conditions NA at night. **Rwy 12,** NA-terrain. **Rwy 30,** NA-airspace.

DEPARTURE PROCEDURE: **Rwy 17,** climb via DTA VORTAC R-347 to DTA VORTAC, or climb in visual conditions to cross departure end of runway southbound at or above 6400, then via DTA VORTAC R-347 to DTA VORTAC, thence...**Rwy 35,** climb via heading 346° to 5800, then climbing left turn via heading 180° and DTA VORTAC R-310 to DTA VORTAC, thence...

...climb in holding pattern (hold south, left turn, 004° inbound) to cross DTA VORTAC at or above airway MEA for route of flight.

NOTE: **Rwy 17,** trees 1598' from departure end of runway, 62' right of centerline, 60' AGL/4799' MSL.

DOUGLAS BISBEE, AZ

BISBEE- DOUGLAS INTL

DEPARTURE PROCEDURE: Climb to 5700 in holding pattern, right turn to 140 inbound DUG VORTAC, then assigned route. CAT C,D turbojets climb not to exceed 250 kts. to 8000.

DUCHESNE, UT

DUCHESNE MUNI

DEPARTURE PROCEDURE: Climb direct to MTU VORTAC to depart at or above 7200 eastbound or 10000 westbound.

ELKO, NV

ELKO RGNL

TAKE-OFF MINIMUMS: **Rwy 5,** 2500-3 or std. with a min. climb of 330' per NM to 8000. **Rwy 23**, 2500-3 or std. with a min. climb of 340' per NM to 8000.

DEPARTURE PROCEDURE: **Rwy 5**, climb runway heading to 6000, then climbing right turn direct BQU VOR/DME, then...

Rwy 23, (V32 Southwest) climb to 6000, then climbing left turn heading 200°to intercept BQU R-241 (V32).

Rwy 23, all others climb runway heading to 6000, then climbing left turn direct BQU VOR/DME, then...

climb in BQU VOR/DME holding pattern (S, left turns, 340° inbound) to cross BQU VOR/DME at the MEA/MCA/MOCA for direction of flight.

ELY, NV

ELY AIRPORT-YELLAND FIELD

TAKE-OFF MINIMUMS: **Rwys 30,36**, 3000-2 or std. with a min. climb of 700' per NM to 10000.

DEPARTURE PROCEDURE: **Rwys 12,30,36**, right turn; **Rwy 18**, straight ahead; intercept . ELY VOR/DME R-150 to 10000. Aircraft departing on V293 southeast climb on course to MEA. Departures V269 or V293 northbound, reverse course to the left, continue climb to cross ELY VOR/DME at or above 12000.

FALLON, NV

FALLON MUNI

TAKE-OFF MINIMUMS: **Rwy 13**, 300-1 or std. with a min. climb of 350' per NM to 4300.

DEPARTURE PROCEDURE: **Rwy 21**, turn right.

Rwys 3,13,31, turn left. All departures climb via HZN R-075 to HZN VORTAC. Climb in holding pattern (W, right turns, 075° inbound) to depart HZN VORTAC at or above: R-240 CW R-149, 8000; R-150 CW R-239, 9000. Continue climb on course to MEA or assigned altitude.

FALLON NAS (KNFL)

FALLON, NV

Diverse departures not authorized.

FLAGSTAFF, AZ

FLAGSTAFF PULLIAM

DEPARTURE PROCEDURE: **Rwy 3,** turn right. **Rwy 21,** turn left. Aircraft departing FLG R-160 CW R-175 climb on course. All others climb southbound on FLG R-172 to 9000, then climbing left turn direct FLG VOR/DME.

FORT HUACHUCA-SIERRA VISTA, AZ

SIERRA VISTA MUNI-LIBBY AAF

TAKE-OFF MINIMUMS: **Rwy 21**, NA.

DEPARTURE PROCEDURE: **Rwys 3,8,12**, turn left. **Rwys 26,30**, turn right. **All aircraft** climb to 9500 to TOMBS Int via FHU VOR R-019 or 018° bearing from DAO NDB.

GLENDALE, AZ

GLENDALE MUNI

TAKE-OFF MINIMUMS: **Rwy 19,** NA-ATC.

DEPARTURE PROCEDURE: **Rwy 1,** Use DRAKE (RNAV) DEPARTURE.

GLOBE, AZ

SAN CARLOS APACHE (P13)

ADMT 2 08101 (FAA)

DEPARTURE PROCEDURE: Use IZTIR DEPARTURE.

GOODYEAR, AZ

PHOENIX GOODYEAR

TAKE-OFF MINIMUMS: **Rwy 3,** NA-ATC.

DEPARTURE PROCEDURE: **Rwy 21,** Use POTER DEPARTURE.

GRAND CANYON, AZ

GRAND CANYON NATIONAL PARK

TAKE-OFF MINIMUMS: **Rwy 3,** NA-environmental.

DEPARTURE PROCEDURE: **Rwy 21,** use GRAND DEPARTURE.

HEBER CITY, UT

HEBER CITY MUNI-RUSS MCDONALD FIELD

DEPARTURE PROCEDURE: **Rwy 3,** Use COOLI RNAV DEPARTURE.

HILL AFB (KHIF)

OGDEN, UT

Diverse departures not authorized, use radar vectors or published Departure Procedures (DP) for obstacle avoidance.

HUNTINGTON, UT

HUNTINGTON MUNI (69V)

AMDT 2A 09295 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18, 26, 36**, NA. **Rwy 30**, 1700-3 or std. with a min. climb of 300' per NM to 8100.

DEPARTURE PROCEDURE: **Rwys 8, 12,** climbing left turn direct PUC VOR/DME...

Rwy 30, climbing right turn direct PUC VOR/DME....

...continue climb in PUC VOR/DME holding pattern (hold S, right turns, 009° inbound) to MEA for direction of flight.

NOTE: **Rwy 8,** tree 2663' from DER, 922' left of centerline, 40' AGL/5979' MSL. **Rwy 12,** tree 333' from DER, 132' right of centerline, 40' AGL/5919' MSL. **Rwy 30,** tree 2065' from DER, 875' left of centerline, 40' AGL/5999' MSL.

KANAB, UT

KANAB MUNI

TAKE-OFF MINIMUMS: **Rwy 1,** std. with a min. climb of 316' per NM to 7200.

NOTE: Use KACIR ONE RNAV DEPARTURE.

KINGMAN, AZ

KINGMAN

TAKE-OFF MINIMUMS: **Rwys 3,17,21,35**, 800-1 or std. with a min. climb of 210' per NM to 7000.

DEPARTURE PROCEDURE: Climb northbound on IGM R-010 until reaching 6000; reverse course to the left and continue climb to 9000 direct to IGM. If unable to cross IGM at 9000 continue climb in IGM holding pattern (SW, left turns, 027° inbound).

LAGUNA AAF (LGF)

YUMA PROVING GROUND, AZ (03247)

Rwy 6, 18, 36 turn right, climb to 3600 direct BZA VORTAC.

Rwy 24 climb to 3600 direct to BZA VORTAC.

TAKE-OFF OBSTACLES:

Rwy 18: 386' (6' AGL) windsock, 818' from departure end of rwy, 194' left of centerline.

LAKE HAVASU CITY, AZ

LAKE HAVASU CITY

TAKE-OFF MINIMUMS: **Rwy 14,** 300-1½ or std. w/ min. climb of 278' per NM to 1200. **Rwy 32,** 600-1½ or std. w/ min. climb of 492' per NM to 1100.

DEPARTURE PROCEDURE: **Rwy 14,** climbing right turn heading 300° to intercept EED VORTAC R-155 to EED VORTAC, climb in EED VORTAC holding pattern (east, right turn, 257° inbound) to cross EED VORTAC at or above airway MEA for route of flight. **Rwy 32,** climbing left turn heading 290° to intercept EED VORTAC R-155 to EED VORTAC, climb in EED VORTAC holding pattern (east, right turn, 257° inbound) to cross EED VORTAC at or above airway MEA for route of flight.

NOTE: **Rwy 14,** obstruction light on transmission tower, 1.2 NM from departure end of runway, 1885' left of centerline, 151' AGL/1027' MSL. Transmission tower 1.4 NM from departure end of runway, 1953' left of centerline, 145' AGL/1058' MSL. Bush 1080' from departure end of runway, 500' left of centerline, 31' AGL/825' MSL. Terrain 145' from departure end of runway, 347' left of centerline, 14' AGL/797' MSL. Bush 1256' from departure end of runway, 255' left of centerline, 35' AGL/818' MSL. **Rwy 32,** obstruction light on transmission tower 4052' from departure end of runway, 932' right of centerline, 180' AGL/974' MSL. Transmision tower 2504' from departure end of runway, 1009' right of centerline, 112' AGL/903' MSL.

LAS VEGAS, NV

HENDERSON EXECUTIVE

TAKE-OFF MINIMUMS: **Rwy 17L/R,** Cat A/B std. with a min. climb of 491' per NM to 6000, or 2100-3 for climb in visual conditions, Cat C/D NA. **Rwy 35L/R,** Cat A/B std. with a min. climb of 312' per NM to 4700, or 2100-3 for climb in visual conditions, Cat C/D NA.

DEPARTURE PROCEDURE: **Rwy 17L/R,** climbing right turn via LAS R-157 to LAS VORTAC before proceeding on course, or for climb in visual conditions: Cross Henderson Executive Airport eastbound at or above 4500, then via BLD R-249 to BLD VORTAC. **Rwy 35L/R,** climbing right turn via BLD R-257 to BLD VORTAC before proceeding on course, or for climb in visual conditions: Cross Henderson Executive Airport eastbound at or above 4500, then via BLD R-249 to BLD VORTAC.

NOTE: **Rwy 17L,** tree 5610' from departure end of runway, 82' left of centerline, 100' AGL/2739' MSL. Tree 1.9 miles from departure end of runway, 1495' left of centerline, 100' AGL/2859' MSL. **Rwy 17R,** tree 4041' from departure end of runway, 859' left of centerline, 100' AGL/2739' MSL.

MCCARRAN INTL (KLAS)

TAKE-OFF MINIMUMS: **Rwy 25R,** 200-1 or std. with a min. climb of 220' per NM to 2400.

DEPARTURE PROCEDURE: **Rwys 1L, 1R,** climbing right turn direct BLD VORTAC. **Rwys 7L, 7R,** climb via heading 075° to 3400 then climbing right turn direct BLD VORTAC. **Rwys 19L, 19R,** climbing left turn via heading 120° and BLD VORTAC R-257 to BLD VORTAC. **Rwys 25L, 25R,** climb via heading 255° to 2700 then climbing right turn direct BLD VORTAC.

NOTE: **Rwy 1L,** multiple poles, tree, and building 450' from departure end of runway, 283' left of centerline, up to 174' AGL/2132' MSL. Obstruction light on WSK 248' from departure end of runway, 224' right of centerline, 15' AGL/2104' MSL. **Rwy 1R,** multiple sign and building 1331' from departure end of runway, 448' right of centerline, up to 100' AGL/2120' MSL. **Rwy 7L,** multiple poles and trees 747' from departure end of runway, 442' right of centerline, up to 62' AGL/2062' MSL. Tree 1257' from departure end of runway, 789' left of centerline, 65' AGL/2077' MSL. **Rwy 7R,** lighted WSK 126' from departure end of runway, 290' right of centerline, 25' AGL/2051' MSL. **Rwy 19L,** multiple poles, sign and building 1394' from departure end of runway, 320' right of centerline, up to 51' AGL/2256' MSL. **Rwy 19R,** multiple poles, sign, and building 197' from departure end of runway, 125' right of centerline, up to 51' AGL/2256' MSL. Multiple pole and building 1396' from departure end of runway, 356' left of centerline, up to 47' AGL/2262' MSL. **Rwy 25L,** multiple poles, sign, and building 1003' from departure end of runway, 251' left of centerline, up to 63' AGL/2256' MSL. **Rwy 25R,** multiple poles and road 675' from departure end of runway, 17' right of centerline, up to 100' AGL/2301' MSL. Multiple poles and buildings 533' from departure end of runway, 1' left of centerline, up to 150' AGL/2469' MSL.

NORTH LAS VEGAS (VGT)

AMDT 3 08045 (FAA)

DEPARTURE PROCEDURE: Use BOULDER CITY DEPARTURE.

LOGAN, UT

LOGAN-CACHE (LGU)
AMDT 8 09351 (FAA)

TAKE-OFF MINIMUMS: **Rwys 10,28 ,**NA-obstacles.

DEPARTURE PROCEDURE: **Rwys 17, 35,** use ORNEY DEPARTURE.

LOVELOCK, NV

DERBY FIELD (LOL)
ORIG-A 08297 (FAA)

TAKE-OFF MINIMUMS: **Rwy 1**, 2300-2 or std. with a min. climb of 300' per NM to 6200. **Rwy 7**, 1100-1 or std. with a min. climb of 250' per NM to 5000. **Rwys 19, 25**, 2300-2 or std. with a min. climb of 260' per NM to 6200.

DEPARTURE PROCEDURE: **Rwy 1,** turn right. **Rwys 7,19,25,** turn left, climb direct LLC VORTAC. Aircraft departing 330° CW 359° climb via LLC R-333 to ROBUD INT; 360° CW 089° climb in LLC VORTAC holding pattern (hold NW, left turns, 153° inbound) to depart LLC VORTAC at or above 8600; 090° CW 219° climb on course; 220° CW 329° climb in LLC VORTAC holding pattern to depart LLC VORTAC at or above 8600. Continue climb on course to MEA or assigned altitude.

LUKE AFB (KLUF)

GLENDALE, AZ . . . . . AMDT 3, 09183

Diverse departures not authorized.

Use published DP, if unable to comply with DP notify clearance delivery and request RADAR Vectors.

TAKE-OFF OBSTACLES:

RWY 3L: Taxiing aircraft, 19' AGL/1126' MSL, 1221' from DER, 782' left of centerline. Taxiing aircraft, 19' AGL/1126' MSL, 1407' from DER, 609' left of centerline. Weather equipment, 15' AGL/1117' MSL, 759' from DER, 505' right of centerline. Weather equipment, 15' AGL/1117' MSL, 1209' from DER, 505' right of centerline. Building, 20' AGL/1127' MSL, 1620' from DER, 925' left of centerline.

RWY 21L: Taxiing aircraft, 38' AGL/1120' MSL, 1428' from DER, 774' left of centerline.

MESA, AZ

FALCON FIELD

TAKE-OFF MINIMUMS: **Rwys 4L,4R,** std. with a min. climb of 459' per NM to 3600, or 1100-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 4L, 4R,** climbing left turn to 5000 via 220° bearing from FFZ NDB to intercept the PXR VORTAC R-143 southeast bound. For climb in visual conditions cross FFZ NDB at or above 2300 then proceed via 220° bearing to PXR R-143 southeast bound. **Rwy 22L, 22R,** climb to 5000 via 220° bearing from FFZ NDB to intercept the PXR VORTAC R-143 southeast bound.

NOTE: **Rwy 4L,** light standard 416' from departure end of runway, 415' left of centerline, 48' AGL/1428' MSL. Obstacle light on building 1313' from departure end of runway, 424' left of centerline, 54' AGL/1434' MSL. **Rwy 4R,** light standard 514' from departure end of runway, 565' right of centerline, 48' AGL/1441' MSL. Tree 1097' from departure end of runway, 650' right of centerline, 50' AGL/1448' MSL. Tree 1060' from departure end of runway, 359' right of centerline, 50' AGL/1451' MSL. **Rwy 22L,** light pole 254' from departure end of runway, 538' right of centerline, 13' AGL/1382' MSL. Windmill 691' from departure end of runway, 528' right of centerline, 30' AGL/1389' MSL. Windmill 715' from departure end of runway, 603' right of centerline, 30' AGL/ 1389' MSL. Light pole 68' from departure end of runway, 764' right of centerline, 13' AGL/ 1382' MSL. Tree 175' from departure end of runway, 826' right of centerline, 13' AGL/ 1383' MSL. **Rwy 22R,** light pole 296' from departure end of runway, 541' right of centerline 13' AGL/1400' MSL. Light pole 495' from departure end of runway, 187' right of centerline, 13' AGL/ 1382' MSL. LIght pole 594' from departure end of runway, 65' right of centerline, 13' AGL/1382' MSL.

MESQUITE, NV

MESQUITE

TAKE-OFF MINIMUMS: **Rwy 1,** 900-3, or std. with a min. climb of 620' per NM to 2400.

DEPARTURE PROCEDURE: **Rwy 1,** climbing left turn, **Rwy 19,** climbing right turn. **All aircraft** climb direct MMM VORTAC. Aircraft departing MMM R-149 CW R-220 climb on course. All others continue climb via MMM R-196 to 6100 and reverse course to cross MMM VORTAC at or above: R-221 CW R-270 and R-331 CW R-060, 6100; R-271 CW R-330, 7300; R-061 CW R-150, 8300.

MICHAEL AAF (KDPG),

DUGWAY PROVING GROUND, UT

.... .Amdt 1, 09099
Rwy 12, 4700-3*

* Or standard with minimum climb of 305 ft/NM to 6100.

DEPARTURE PROCEDURES: **Rwy 12** Climb via heading 122° to 6100, then right turn direct DPG NDB. Continue climb in DPG NDB holding pattern (Hold W, LT, 080° inbound) to 9600 before proceeding on course, or for climb in visual conditions: Cross Michael AAF, Dugway Proving Ground at or above 8900 before proceeding on course. **Rwy 30** Climb via heading 302° to 6100 then left turn direct DPG NDB, continue climb in DPG NDB holding pattern (Hold W, LT, 080° inbound) to 9600 before proceeding on course.

MILFORD, UT

MILFORD MUNI/BEN AND JUDY BRISCOE FIELD

TAKE-OFF MINIMUMS: **Rwy 34**, CAT A,B 1200-2 or std. with a min. climb of 360' per NM to 6500. CAT C,D NA.

DEPARTURE PROCEDURE: **Rwy 16**, climb direct MLF VORTAC. **Rwy 34,** climbing left turn direct MLF VORTAC. Aircraft departing MLF R-170 CW R-210 climb on course. All other aircraft continue climb southbound via MLF R-190 to 7600, then climbing right turn to cross MLF VORTAC at or above 9000, then climb on course.

MINDEN, NV

MINDEN-TAHOE

TAKE-OFF MINIMUMS: **Rwys 12,16,30,** NA. **Rwy 34,** 4000-3 or std. with a min. climb of 531' per NM to 8700.

DEPARTURE PROCEDURE: **Rwy 34,** use MINDEN RNAV DEPARTURE.

MOAB,UT

CANYONLANDS FIELD

TAKE-OFF MINIMUMS: **Rwy 3**, std. with a min. climb of 320' per NM to 5800. **Rwy 21,** std. with a min. climb of 330' per NM to 5400.

DEPARTURE PROCEDURE: **Rwy 3**, turn left. **Rwy 21**, turn right climb to 6700 via OAB R-293, then climbing right turn direct OAB VOR/DME. Climb in OAB holding pattern (NW, left turns, 113° inbound) to 10000 then proceed on course.

NOTE: **Rwy 3,** tree 4383' from departure end of runway, 1507' right of centerline, 50' AGL/4729' MSL. Road 1749' from departure end of runway, 905' left of centerline, 15' AGL/4635' MSL. Tree 3914' from departure end of runway, 1166' right of centerline, 50' AGL/4690' MSL. Tree 1.25 NM from departure end of runway, 400' right of centerline, 50' AGL/4758' MSL. **Rwy 21,** pole 2026' from departure end of runway, 78' right of centerline, 80' AGL/4625' MSL. Pole 2061' from departure end of runway, 40' right of centerline, 80' AGL/4625' MSL. Pole 2095' from departure end of runway, 857' right of centerline, 80' AGL/4623' MSL. Pole 1980' from departure end of runway, 344' right of centerline, 80' AGL/4602' MSL.

NELLIS AFB (KLSV)

LAS VEGAS, NV 08241

Rwy 3L/R, 10,200-3* SR-SS
Rwy 21L/R, 10,200-3* SR-SS
Diverse departure not authorized.

MILITARY: Use published DP, if unable to comply with DP climb gradient file appropriate DP for intended destination and notify clearance delivery and request RADAR Vectors (Climb Gradient of 300' per NM until 12,000 for RADAR Vectors). If unable to comply with RADAR Vector climb gradient, A/C must depart VFR.

* CIVIL: Use published DP, if unable to comply with DP climb gradient file appropriate DP for intended destination and notify clearance delivery and request RADAR Vectors (Climb Gradient of 330' per NM until 12,000 for RADAR Vectors). If unable to comply with RADAR Vectors climb gradient, A/C may use published weather minimums or depart VFR.

TAKE-OFF OBSTACLES: **RWY 3L**: Terrain 0' AGL/1870' MSL, 0' inward of DER, 500' left of centerline. Road 15' AGL/1934' MSL, 1321' from DER, 802' left of centerline. **RWY 3R**: C-5 on taxiway 65' AGL/1936' MSL, 1345' from DER, 822' right of centerline. Road 15' AGL/2014' MSL, 3929' from DER, 1404' right of centerline. **RWY 21L**: Trees 90' AGL/1949' MSL, 4594' from DER, 1596' right of centerline. Trees 90' AGL/1949' MSL, 4940' from DER, 541' right of centerline. Trees 60' AGL/1899' MSL 929' from DER, 724' left of centerline. Trees 60' AGL/1899' MSL, 946' from DER, 626' left of centerline. Trees 60' AGL/1899' MSL, 2720' from DER, 341' left of centerline. Trees 60' AGL/1899' MSL, 2514' from DER, 403' left of centerline.

RWY 21R: Terrain 0' AGL/1835' MSL, 0' inward of DER, 500' right of centerline. Trees 90' AGL/1949' MSL, 4594' from DER, 597' right of centerline. Building 45' AGL/1904' MSL, 2274' from DER, 1037' right of centerline. Road 15' AGL/1874' MSL, 1404' from DER, 465' right of centerline.

NOGALES, AZ

NOGALES INTL (OLS)
AMDT 2 09351 (FAA)

TAKE-OFF MINIMUMS: Use NOGALES DEPARTURE.

OGDEN, UT

OGDEN-HINCKLEY (OGD)
AMDT 2 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwys 7,16,** NA- Obstacles.

DEPARTURE PROCEDURE: **Rwys 3, 21, 25, 34,** Use EMONT DEPARTURE.

PAGE, AZ

PAGE MUNI (PGA)
AMDT 2 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwys 7, 25,** NA – obstacles **Rwy 15,** 300-1 or std. w/ min. climb of 252' per NM to 6500, or 1900-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 15,** climb via 157° heading to 6000, then climbing right turn to PGA VOR/DME. cross PGA VOR/DME at or above 7700. Continue climb in PGA VOR/DME holding pattern (hold NW, right turns, 147° inbound) to airway MEA, or climb in visual conditions: cross Page airport at or above 6100, before proceeding on course. **Rwy 33,** climb via 337° heading to 6000, then climbing left turn to PGA VOR/DME. Cross PGA VOR/DME at or above 7700. Continue climb in PGA VOR/DME holding pattern (hold NW, right turns, 147° inbound) to airway MEA.

NOTE: **Rwy 15,** terrain 192' from departure end of runway, 274' right of centerline, 4323' MSL, tree 1.07 NM from departure end of runway, 167' left of centerline, 4519 MSL, transmission lines 1.96 NM from departure end of runway, 825' left of centerline, 100' AGL/4519' MSL, power line 4.00 NM from departure end of runway, 3606' right of centerline, 75' AGL/4819' MSL, power line 4.35 NM from departure end of runway, 3968' right of centerline, 75' AGL/4919' MSL, power line 5.36 NM from departure end of runway, 5039' right of centerline, 75' AGL/5119' MSL, power line 4.51 NM from departure end of runway, 4136' right of centerline, 75' AGL/5019' MSL, tree 4.52 NM from departure end of runway, 1508' right of centerline, 100' AGL/5173' MSL, AAO 4.58 NM from departure end of runway, 1617' right of centerline, 200' AGL/5187' MSL, AAO 5.15 NM from departure end of runway, 4456' left of centerline, 200' AGL/5190' MSL, tree 5.56 NM from departure end of runway, 4097' right of centerline, 30' AGL/5249' MSL, AAO 5.98 NM from departure end of runway, 653' left of centerline, 200' AGL/5440' MSL.

PARKER, AZ

AVI SUQUILLA

TAKE-OFF MINIMUMS: **Rwy 1**, 800-1½. **Rwy 19**, 300-1.

DEPARTURE PROCEDURE: **Rwy 19**, right turn. **Rwy 1**, left turn. Climb via R-067 to PKE VORTAC, to cross above 4500. Continue climb on course to MEA or assigned altitude.

PAYSON, AZ

PAYSON

TAKE-OFF MINIMUMS: **Rwy 6,** std. with a min. climb of 360' per NM to 9300, or 2500-3 for climb in visual conditions. **Rwy 24,** std. with a min. climb of 375' per NM to 9300, or 2500-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 6, 24,** for climb in visual conditions: Cross Payson Airport at or above 7500, then proceed on course.

NOTE: **Rwy 24,** bush 15' from departure end of runway, 133' right of centerline, 6' AGL/5148' MSL. Tree 320' from departure end of runway, 183' right of centerline, 12' AGL/5154' MSL. Fence 85' from departure end of runway, 84' left of centerline, 4' AGL/5141' MSL. Tree 164' from departure end of runway, 126' left of centerline, 9' AGL/5147' MSL.

PHOENIX, AZ

PHOENIX-DEER VALLEY

DEPARTURE PROCEDURE: Use DEER VALLEY DEPARTURE.

PHOENIX SKY HARBOR INTL (PHX)
AMDT 4A 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 26,** 700-3 or std. with a min. climb of 358' per NM to 2000.

DEPARTURE PROCEDURE: **Rwys 7L, 7R, 8,** climb via 078° heading to 3000, then climbing right turn direct PHOENIX (PXR) VORTAC. **Rwys 25L, 25R**, climb via 258° heading to 1550 then climbing right turn to join the PXR R-260 (V16) westbound, climb to 5000. **Rwy 26,** climb via 258° heading to 1550 then climbing left turn to join the PXR R-260 (V16) westbound, climb to 5000. Westbound departures continue climb on PXR R-260. All others, climbing right turn direct PXR VORTAC.

NOTE: **Rwy 7L,** building 1332' from DER, 798' left of centerline, 67' AGL/1176' MSL. **Rwy 7R,** rod 716' from DER, 184' right of centerline, 87' AGL/1196' MSL. **Rwy 8,** light standard 3530' from DER, 1207' left of centerline, 123' AGL/1232' MSL. Light standard 3479' from DER, 1003' left of centerline, 118' AGL/1227' MSL. **Rwy 25L,** light standard 1129' from DER, 774' left of centerline, 91' AGL/1200' MSL. ASDE-X equipment 411' from DER, 531' left of centerline, 29' AGL/1135' MSL. **Rwy 26,** light 59' from DER, 63' right of centerline, 16' AGL/1125' MSL. Pole 58' from DER, 90' right of centerline, 25' AGL/1125' MSL. Light 78' from DER of runway, 64' right of centerline, 18' AGL/1127' MSL. Light 38' from DER, 440' left of centerline, 24' AGL/1135' MSL. Light standard 77' from DER, 453' left of centerline, 27' AGL/1136' MSL. Light standard 74' from DER, 456' right of centerline, 33' AGL/1142' MSL. Light standard 77' from DER, 434' right of centerline, 31' AGL/1140' MSL. Tree 113' from DER, 294' right of centerline, 24' AGL/1133' MSL. Building 2.32 NM from DER, 3309' right of centerline,406' AGL/1496' MSL. Building 2.28 NM from DER, 3612' right of centerline, 663' AGL/1750' MSL. Tree 234' from DER, 214' right of centerline, 24' AGL/1133' MSL. Light standard 64' from DER, 68' left of centerline, 39' AGL/1125' MSL. ASDE-X equipment 897' from DER, 413' right of centerline, 35' AGL/1141' MSL.

PHOENIX-MESA GATEWAY

TAKE-OFF MINIMUMS: **Rwys 30L,30C,30R,** CAT C,D,E 2000-2 or std. with a min. climb of 230' per NM to 3900.

DEPARTURE PROCEDURE: **Rwys 12L,12C,12R,** climb to 2500 via IWA R-122 then climbing right turn direct PXR VORTAC. **Rwys 30L,30C,30R,** climbing right turn to 4000 via IWA R-122 then climbing right turn direct PXR VORTAC.

PRESCOTT, AZ

ERNEST A. LOVE FIELD

TAKE-OFF MINIMUMS: **Rwy 12,** 2700-2 or std. with a min. climb of 460' per NM to 8100. **Rwy 21L,** 2700-2 or std. with a min. climb of 500' per NM to 8100. **Rwy 30,** 300-1 or std. with a min. climb of 300' per NM to 5200. **Rwy 3L, 21R,** NA.

DEPARTURE PROCEDURE: **Rwy 3R,** turn left heading 250° to intercept DRK R-305. **Rwy 12,** turn right direct DRK VORTAC. **Rwy 21L,** turn right heading 335° to intercept DRK R-305. **Rwy 30,** climb direct DRK VORTAC. **All aircraft** continue climb via DRK R-305 to 9000. Aircraft departing via DRK R-305 continue climb on course. All other aircraft turn right direct DRK VORTAC then climb on course.

PRICE, UT

CARBON COUNTY RGNL/BUCK DAVIS FLD (PUC)

AMDT 4 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 7,** NA - per flight check **Rwy 32,** std. w/ min. climb of 425' per NM to 7000, or 3400-3 for climb in visual conditions. **Rwy 36,** std. w/ min. climb of 400' per NM to 7200, or 3400-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 14,** climb on a heading between 126° CW to 193°, thence...**Rwy 18**, climb on a heading between 192° CCW to 125°, thence...**Rwy 25,** climb on a heading between 176° CCW to 124°, thence... **Rwy 32,** climb to 7000 then climbing left turn on a heading between 175° CCW to 145°,thence...**Rwy 36,** climb to 6400 then climbing right turn on a heading between 141° CW to 184°, maintain 210K until completion of turn, thence...

...continue climb to assigned altitude for direction of flight. **Rwys 32, 36,** for climb in visual conditions cross Carbon County Rgnl / Buck Davis Field at or above 9200 before proceeding on course.

NOTE: **Rwy 14,** multiple trees beginning 121' from DER, 3' left of centerline, up to 40' AGL/5839 ' MSL. **Rwy 25,** trees 515' from DER, 535' right of centerline, up to 40' AGL/5879' MSL. **Rwy 32,** trees 9544' from DER, 1644' left of centerline, up to 40' AGL/6900' MSL. Trees 11332' from DER, 74' right of centerline, up to 40' AGL/6800' MSL. **Rwy 36,** poles 2599' from DER, 615' left of centerline, 40' AGL/6079 ' MSL. Poles 2715 ' from DER, 668' right of centerline, 59' AGL/6098' MSL.

PROVO, UT

PROVO MUNI

DEPARTURE PROCEDURE: Use PROVO DEPARTURE.

RENO, NV

RENO/STEAD (RTS)

AMDT 3A 09183 (FAA)

TAKE-OFF MINIMUMS: CAT A,B only, CAT C,D NA. **Rwys 8,14,** 1300-2 or std. with a min. climb of 400' per NM to 6500. **Rwy 26,** 1900-2 or std. with a min. climb of 410' per NM to 7200. **Rwy 32,** 2300-2 or std. with a min. climb of 420' per NM to 7200.

DEPARTURE PROCEDURE: **Rwys 8,32,** climbing right turn heading 100° and FMG VORTAC R-314 to FMG VORTAC. **Rwy 14,** left turn climb direct FMG VORTAC. **Rwy 26,** climbing right turn heading 050° and FMG VORTAC R-314 to FMG VORTAC. **All aircraft** climb in FMG VORTAC holding pattern (NE, right turns, 221° inbound) to depart FMG VORTAC; R-260 CW R-170 at or above 10000; R-171 CW R-195 at or above 10500; R-196 CW R-259 at or above 12000.

RENO, NV (CON'T)

RENO/TAHOE INTL (RNO)
AMDT 4 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 7**, NA-terrain. **Rwy 16L,** std. w/ min. climb of 730' per NM to 8000, or 600-1¼ w/ min. climb of 480' per NM to 8000, or 2700-3 for climb in visual conditions. **Rwy 16R,** std. w/ the following minimum climb requirements: 210 knots or less, 385' per NM to 8000; more than 210 knots, 420' per NM to 8900, or 2700-3 for climb in visual conditions. Resume normal speed after passing FMG VORTAC. **Rwy 25,** std. w/ min. climb of 470' per NM to 7800, or 2700-3 for climb in visual conditions. **Rwy 34L,** std. w/ min. climb of 320' per NM to 7000, or 2700-3 for climb in visual conditions. **Rwy 34R,** std. w/ min. climb of 480' per NM to 7000, or 500-1½ w/ min. climb of 320' per NM to 7000, or 2700-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 16L/R,** climb heading 164° to 6600 then climbing left turn direct FMG VORTAC, thence. . . or for climb in visual conditions: cross Reno/Tahoe Intl Airport at or above 7000 via heading 054° and FMG R-234 to FMG VORTAC, thence. . .**Rwy 25,** climb heading 254° to 5000 then climbing right turn direct FMG VORTAC, thence. . . or for climb in visual conditions: cross Reno/Tahoe Intl Airport at or above 7000 via heading 054° and FMG R-234 to FMG VORTAC, thence. . . **Rwys 34L/R,** climb heading 344° to 7000 then climbing right turn direct FMG VORTAC, thence. . . or for climb in visual conditions: cross Reno/Tahoe Intl Airport at or above 7000 via heading 054° and FMG R-234 to FMG VORTAC, thence. . .

. . .**All aircraft:** continue climb in FMG VORTAC holding pattern (northeast, left turn, 221° inbound) to cross FMG VORTAC at or above MEA/MCA for route of flight.

NOTE: **Rwy 16L,** multiple poles, trees, bushes and terrain beginning 618' from departure end of runway, 133' left of centerline, up to 20' AGL/4961' MSL. **Rwy 16R,** multiple trees 2784' from departure end of runway, 171' right of centerline, up to 20' AGL/4510' MSL. Multiple trees and terrain beginning 746' from departure end of runway, 380' left of centerline, up to 20' AGL/4703' MSL. **Rwy 25,** multiple trees and poles beginning 829' from departure end of runway, 201' right of centerline, up to 103' AGL/4523' MSL. Building 6023' from departure end of runway, 456' right of centerline, 152' AGL/4608' MSL. Fence 222' from departure end of runway, 270' right of centerline, up to 5' AGL/4415' MSL. Multiple trees and poles beginning 500' from departure end of runway, 31' left of centerline, up to 20' AGL/4506' MSL. **Rwy 34L,** multiple trees and poles beginning 1229' from departure end of runway, 180' right of centerline, up to 20' AGL/4498' MSL. Multiple trees beginning 1193' from departure end of runway, 331' left of centerline, up to 20' AGL/4489' MSL. **Rwy 34R,** multiple trees and poles beginning 1067' from departure end of runway, 172' right of centerline, up to 20' AGL/4497' MSL. Multiple trees and poles beginning 1230' from departure end of runway, 350' left of centerline, upt o 20' AGL/4498' MSL. Building 1.2 NM from departure end of runway, 1730' right of centerline, 363' AGL/4780' MSL.

RICHFIELD, UT

RICHFIELD MUNI (RIF)
AMDT 1 08157 (FAA)

DEPARTURE PROCEDURE: **Rwy 1,** use RICHFIELD (RNAV) DEPARTURE. **Rwy 19,** use HAMET (RNAV) DEPARTURE.

ROOSEVELT, UT

ROOSEVELT MUNI

TAKE-OFF MINIMUMS: **Rwy 25,** 700-3 or std. with a min. climb of 300' per NM to 6100.

DEPARTURE PROCEDURE: **Rwy 7,** turn right. **Rwy 25,** turn left. **All aircraft,** climb direct MTU VORTAC. Aircraft departing MTU VORTAC R-040 CW R-150, climb on course. All others continue climb in MTU holding pattern (NE, right turns, 213° inbound) to cross MTU VORTAC; R-151 CW R-290 at or above 8000; R-291 CW R-039 at or above 10,000. Then climb on course.

SAFFORD, AZ

SAFFORD RGNL

TAKE-OFF MINIMUMS: IFR departure not authorized.

ST. GEORGE, UT

ST. GEORGE MUNI

TAKE-OFF MINIMUMS: **Rwy 34**, 1500-2 or std. with a min. climb of 325' per NM to 4000.

DEPARTURE PROCEDURE: **Rwy 16**, turn left. **Rwy 34**, turn right. Climb in OZN VOR/DME holding pattern (hold SE, right turns, 296 inbound) to depart OZN VOR/DME at or above MEA for direction of flight.

ST. JOHNS, AZ

ST. JOHNS INDUSTRIAL AIR PARK (SJN)
AMDT 1A 08241 (FAA)

TAKE-OFF MINIMUMS: **Rwy 21**, 400-2 or std. with a min. climb of 205' per NM to 6200.

DEPARTURE PROCEDURE: **Rwys 3, 32,** climbing right turn, **Rwys 14, 21,** climbing left turn. **All aircraft,** climb direct SJN VORTAC. Aircraft departing SJN VORTAC R-240 CW R-080 climb on course. All others continue climb in SJN VORTAC holding pattern (Hold NE, right turns, 239° inbound) to cross SJN VORTAC at or above 9000.

NOTE: **Rwy 14,** 5790' tower 350' right abeam departure end of runway.

SALT LAKE CITY, UT

SALT LAKE CITY INTL (SLC)
AMDT 10 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14, 32,** NA, operational.

DEPARTURE PROCEDURE: **Rwys 16L, 16R,** climb to 10000 via heading 161° and FFU R-341 to FFU VORTAC before proceeding on course. **Rwy 17,** climb to 10000 via heading 166° and FFU R-341 to FFU VORTAC before proceeding on course. **Rwys 34L, 34R,** climb to 9000 via heading 341° and OGD R-153 to OGD VORTAC before proceeding on course. **Rwy 35,** climb to 9000 via heading 336° and OGD R-153 to OGD VORTAC before proceeding on course.

NOTE: **Rwy 16L,** vehicle 124' from DER, 14' right of centerline, 15' AGL/4239' MSL. Light pole 988' from DER, 726' right of centerline, 34' AGL/4254' MSL. Pole 1024' from DER, 689' right of centerline, 34' AGL/4254' MSL. **Rwy 17,** vehicles beginning 335' from DER, on centerline, up to 17' AGL/4241' MSL. **Rwy 34R,** post 13' from DER, 349' right of centerline, 3' AGL/4227' MSL. **Rwy 35,** post 56' from DER, 249' left of centerline, 2' AGL/4220' MSL.

SOUTH VALLEY RGNL AIRPORT (U42)
AMDT 4A 09155 (FAA)

TAKE-OFF MINIMUMS: **Rwy 16**, 2400-3 or std. with a min. climb of 295' per NM to 7700. **Rwy 34,** std. with a min. climb of 353' per NM to 9500.

DEPARTURE PROCEDURE: **Rwy 16,** climbing left turn to 9600 via heading 136° and V21 (TCH R-161 FFU R-341) to FFU VORTAC. Aircraft departing FFU R-156 CW R-263 and R-308 CW R-359 climb on course. All others continue climb in FFU VORTAC holding pattern (S, right turns, 008° inbound) to cross FFU VORTAC at or above: R-360 CW R-093 12400; R-094 CW R-138 10600; R-139 CW R-155 11300; R-264 CW R-307 11500. **Rwy 34,** climbing right turn to 9500 via heading 026° and V21 (TCH R-161) to TCH VORTAC. Aircraft departing TCH R-144 CW R-176 and R-217 CW R-355 climb on course. All others continue climb in TCH VORTAC holding pattern (NW, right turns, 116° inbound) to cross TCH VORTAC at or above: R-356 CW R-116 10700; R-117 CW R-143 11600; R-177 CW R-216 10100.

SCOTTSDALE, AZ

SCOTTSDALE (SDL)
AMDT 7 08269 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3,** std. w/ min climb of 440' per NM to 4000, or 3100-3 for climb in visual conditions. **Rwy 21,** std. w/ min. climb of 215' per NM to 4000, or 3100-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3,** climbing left turn to 4000 via heading 220° and PXR VORTAC R-336 southeast bound to PXR VORTAC. Thence...
Or, for climb in visual conditions: cross Scottsdale airport at or above 4500 MSL before proceeding on course. **Rwy 21,** climbing right turn to 4000 via heading 300° and PXR VORTAC R-336 northwest bound then left turn direct PXR VORTAC. Thence...
Or, for climb in visual conditions: cross Scottsdale airport at or above 4500 MSL before proceeding on course.
...continue climb on course.

NOTE: **Rwy 3,** multiple light standards beginning 63' from departure end of runway, 445' left of centerline, up to 44' AGL/1554' MSL. Hoist on dike 878' from departure end of runway, 735' left of centerline, 51' AGL/1561' MSL. Dike beginning 1066' from departure end of runway, 316' left of centerline, 38' AGL/1548' MSL. Day marker on dike 1230' from departure end of runway, 5' left of centerline, 39' AGL/1549' MSL. Tree, 269' from departure end of runway, 490' left of centerline, 13' AGL/1523' MSL. Tree 51' from departure end of runway, 279' left of centerline, 6' AGL/1516' MSL. Tree 765' from departure end of runway, 115' left of centerline, 22' AGL/1532' MSL. Road beginning 647' from departure end of runway, 296' left of centerline, 19' AGL/1529' MSL. Tree 227' from departure end of runway, 97' left of centerline, 6' AGL/1516' MSL. Fence beginning 5' from departure end of runway, 338' right of centerline, 6' AGL/1511' MSL. Light standard, 1013' from departure end of runway, 430' right of centerline, 44' AGL/1552' MSL. **Rwy 21,** tree 1072' from departure end of runway, 426' right of centerline, 53' AGL/1497' MSL. Building 316' from departure end of runway, 537' right of centerline, 23' AGL/1467' MSL. Tree 2087' from departure end of runway, 418' left of centerline, 61' AGL/1505' MSL. Tree 1432' from departure end of runway, 438' right of centerline, 38' MSL/1482' MSL. Tree 2234' from departure end of runway, 559' left of centerline, 58' AGL/1502' MSL.

SEDONA, AZ

SEDONA (SEZ)
AMDT 1 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3,** NA- Obstacles.

DEPARTURE PROCEDURE: **Rwy 21,** Use OATES RNAV DEPARTURE.

SHOW LOW, AZ

SHOW LOW RGNL

DEPARTURE PROCEDURE: **Rwys 3,6**, turn left. **Rwys 21,24**, turn right. All aircraft climb via 345 bearing from SOW NDB to DEHOG INT then climb on course.

SPRINGERVILLE, AZ

SPRINGERVILLE MUNI

TAKE-OFF MINIMUMS: **Rwy 21,** 1000-2 or std. with a min. climb of 360' per NM to 8400.

DEPARTURE PROCEDURE: **Rwys 3, 11,** climbing left turn to 8400 via heading 360° before proceeding on course. **Rwys 21, 29,** climbing right turn to 8400 via 360° before proceeding on course.

TAYLOR, AZ

TAYLOR MUNI

TAKE-OFF MINIMUMS: **Rwy 21,** 300-1 or std. with a min. climb of 248' per NM to 6100.

DEPARTURE PROCEDURE: **Rwy 3/21,** climb on runway heading to 8000 before turning on course.

TONOPAH, NV

TONOPAH

TAKE-OFF MINIMUMS: **Rwys 11,29**, NA. **Rwys 15,33**, 2600-2 or std. with a min. climb of 260' per NM to 8000.

DEPARTURE PROCEDURE: **Rwy 15**, turn left. **Rwy 33**, turn right. Climb direct TPH VORTAC. Continue climb in holding pattern (NE, right turns, 246° inbound) to depart TPH VORTAC at or above 8000. Climb on course to MEA or assigned altitude.

TOOELE, UT

BOLINDER FIELD-TOOELE VALLEY

TAKE-OFF MINIMUMS: **Rwy 17,** std. with a min. climb of 490' per NM to 11000. **Rwy 35,** std. with a min. climb of 360' per NM to 9000.

DEPARTURE PROCEDURE: Use STACO DEPARTURE.

NOTE: **Rwy 17,** tree 794' from departure end of runway, 277' right of centerline, 35' AGL/4380' MSL. Tree 967' from departure end of runway, 432' right of centerline, 35' AGL/4394' MSL. Tree 1023' from departure end of runway, 313' right of centerline, 35' AGL/4395' MSL.

TUCSON, AZ

MARANA RGNL

TAKE-OFF MINIMUMS: **Rwys 3, 12,** N/A-Obstacles

DEPARTURE PROCEDURE: **Rwy 21,** climb to 6500 via heading 360° and TUS R-308 to TOTEC Int/TUS 57 DME, then as filed. **Rwy 30,** climb to 6500 via heading 303° intercept TUS R-308 above 3500, to TOTEC INT/TUS 57 DME, then as filed.

NOTE: **Rwy 21,** road 192' from departure end of runway, 527' left of centerline 15' AGL/2034' MSL.

RYAN FIELD

DEPARTURE PROCEDURE: **Rwy 6R,** turn right; **Rwy 24L**, turn left direct to Ryan NDB. Continue climb in holding pattern (W, right turn 090° inbound) to 5000 before proceeding on course.

TUCSON, AZ (CON'T)

TUCSON INTL (TUS)

AMDT 4A 08241 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3,** 300-1¾ or std. w/ min. climb of 228' per NM to 3000.

DEPARTURE PROCEDURE: **Rwys 3, 29L,29R,** climbing right turn direct to TUS VORTAC. **Rwys 11L,11R** climb via runway heading to 4000 then climbing left turn direct TUS VORTAC. **Rwy 21,** climbing left turn direct to TUS VORTAC. **All aircraft** continue climbing in holding pattern (NW, right turns, 128° inbound) to depart TUS VORTAC at or above 9000.

NOTE: **Rwy 3,** tower 9215' from departure end of runway, 1689' left of centerline, 246' AGL/2831' MSL.

VERNAL, UT

VERNAL RGNL

TAKE-OFF MINIMUMS: **Rwy 16**, 1500-2 or std with a min. climb of 250' per NM to 7000'. **Rwy 25**, 1500-2 or std. with a min. climb of 390' per NM to 7000. **Rwy 34**, 1600-2 pr std. with a min. climb of 330' per NM to 7000'.

DEPARTURE PROCEDURE: **Rwys 7,34**, turn right. **Rwys 16,25**, turn left. **All aircraft** climb direct VEL. Aircraft departing V391 S-bound climb on course. All others climb in holding pattern (SE, right turns, 322° inbound). Aircraft SW-bound V208 depart VEL at or above 8400', all others depart VEL at or above 9500'. Continue climb on course to MEA or assigned altitude.

WENDOVER, UT

WENDOVER

TAKE-OFF MINIMUMS: **Rwy 26,** standard wit h a min. climb of 300' per NM to 7000. **Rwy 30**, NA.

DEPARTURE PROCEDURE: **Rwys 8,12, 26,** climbing left turn direct BVL VORTAC. Aircraft departing BVL VORTAC R-330 CW R-150 climb on course. All others continue climb in BVL VORTAC holding pattern (Hold NE right turns, 247° inbound) to cross at or above 7400, then climb on course.

WILLCOX, AZ

COCHISE COUNTY

DEPARTURE PROCEDURE: **Rwy 3,** turn right. **Rwy 21,** turn left. **All aircraft** climb direct CIE VORTAC.

WINDOW ROCK, AZ

WINDOW ROCK

TAKE-OFF MINIMUMS: **Rwy 2**, 700-2 or std. with a min. climb of 500' per NM to 8000. **Rwy 20,** 600-2 or std. with a min. climb of 260' per NM to 8200.

DEPARTURE PROCEDURE: **Rwy 2**, turn right. **Rwy 20,** turn left direct to GUP VORTAC before proceeding on course.

NOTE: **Rwy 2,** terrain 3832' from departure end of runway, 1025' right of centerline, 6926' MSL. Poles 5220' from departure end of runway, 245' right of centerline, 180' AGL/6922' MSL. Tower 7067' from departure end of runway, 3072' left of centerline, 71' AGL/7316' MSL. Terrain 7449' from departure end of runway, 1612' left of centerline, 6991' MSL. Terrain 8776' from departure end of runway, 1851' left of centerline, 7109' MSL. Tree 9665' from departure end of runway, 1326' right of centerline, 7340' MSL. Tree 11326' from departure end of runway, 355' left of centerline, 7351' MSL. **Rwy 20,** trees 1018' from departure end of runway, 620' left of centerline, 30' AGL/6768' MSL.

WINNEMUCCA, NV

WINNEMUCCA MUNI

TAKE-OFF MINIMUMS: **Rwy 2**, 2500-2 or std. with a min. climb of 450' per NM to 6800. **Rwys 14,20**, 3200-2 or std. with a min. climb of 520' per NM to 7500.

DEPARTURE PROCEDURE: **Rwys 14,20**, turn right. **Rwy 2**, turn left. **Rwy 32**, climb straight ahead. All aircraft climb via INA R-326 to 6700 or above within 12 NM, then climbing left turn return to INA VOR/DME via R-326. Continue climb in INA VOR/DME holding pattern (hold NW, right turns, 146° inbound) to depart INA VOR/DME at or above 11000. Southbound aircraft continue via INA R-146 direct Fesko Int. Northbound aircraft continue via INA R-326 and SDO R-144 direct SDO VORTAC.

YUMA MCAS/ YUMA INTL(KNYL)

YUMA, AZ 09323

Diverse departures not auth between 360° CW 055° from 25 NM to 30 NM.

Rwy 3L: Cross DER at or above 35' AGL/228' MSL. Diverse departures auth. Fr 083° CW 107°, std with minimum climb of 225'/NM to 3500'.

Rwy 3R: Cross DER at or above 35' AGL/242' MSL. Diverse departures auth. Fr 083° CW 107°, std with minimum climb of 225'/NM to 3500'.

Rwy 21L: Cross DER at or above 35' AGL/223' MSL. Diverse departures auth.

Rwy 21R: Cross DER at or above 35' AGL/227' MSL. Diverse departures auth.

Rwy 8: Cross DER at or above 35' AGL/231' MSL. Diverse departures auth. Fr 069° CW 123°, std with minimum climb of 230'/NM to 3500'.

Rwy 26: Cross DER at or above 35' AGL/230' MSL. Diverse departures auth.

Rwy 17: Cross DER at or above 35' AGL/217' MSL. Diverse departures auth. Fr 068° CW 109°, std with minimum climb of 220'/NM to 3500'.

Rwy 35: Cross DER at or above 35' AGL/231' MSL. Diverse departures auth.

APP CRS	Rwy ldg	7299
027°	TDZE	4531
	Apt Elev	4532

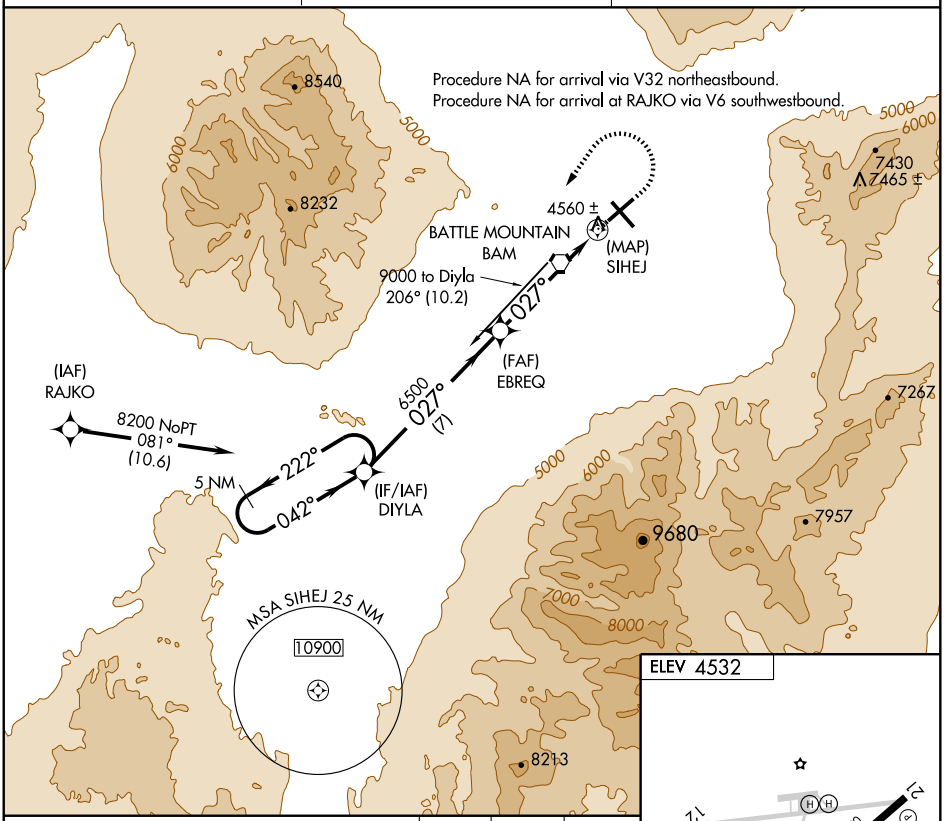
RNAV (GPS) RWY 3
BATTLE MOUNTAIN (BAM)

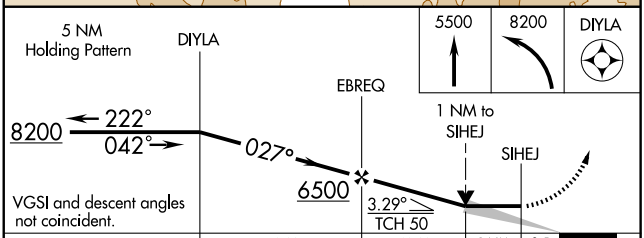
NA

GPS or RNP-0.3 required. DME/DME RNP-0.3.NA

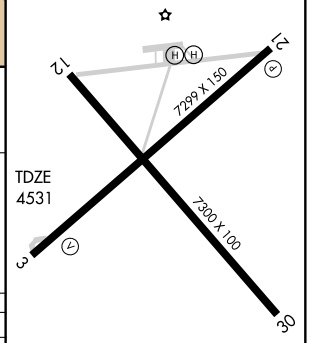
MISSED APPROACH: Climb to 5500 then climbing left turn to 8200 direct DIYLA WP and hold.

AWOS-3	SALT LAKE CITY CENTER	UNICOM
119.45	132.25 338.35	122.8 (CTAF)





ELEV 4532



MIRL Rwys 3-21 and 12-30

CATEGORY	A	B	C	D
LNAV MDA	5040-1 509 (600-1)		5040-1½ 509 (600-1½)	NA
CIRCLING	5040-1 508 (600-1)		5040-1½ 508 (600-1½)	NA

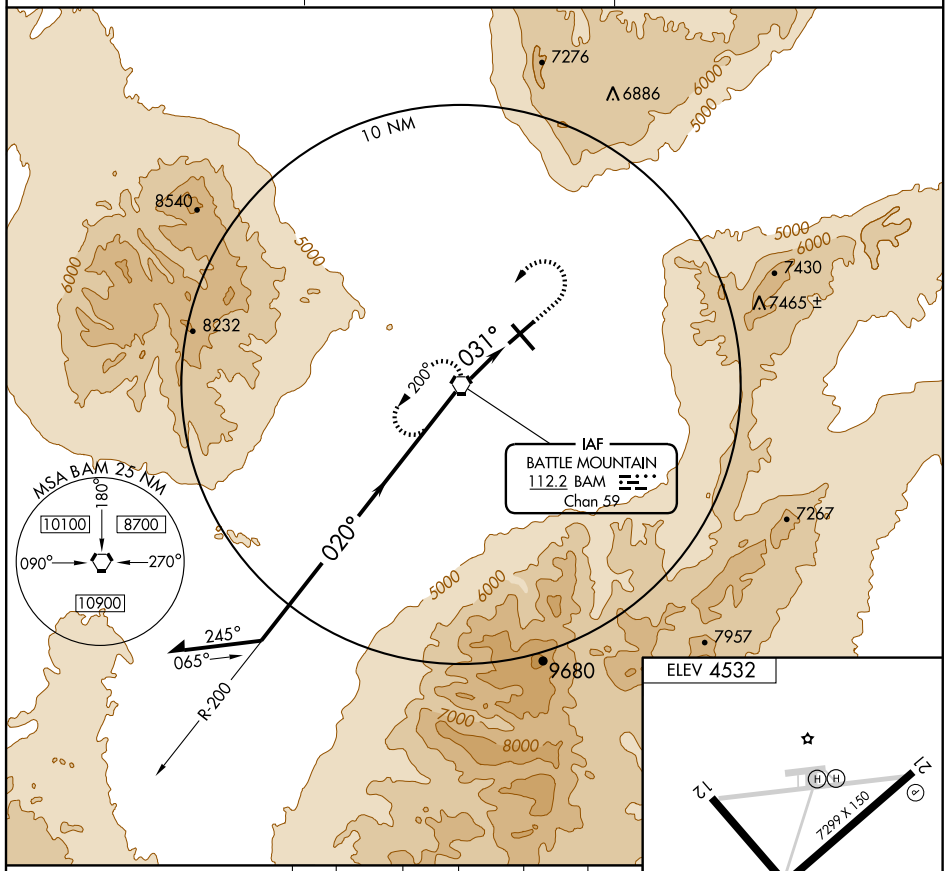
VORTAC BAM 112.2 Chan 59	APP CRS 031°	Rwy ldg N/A TDZE N/A Apt Elev 4532

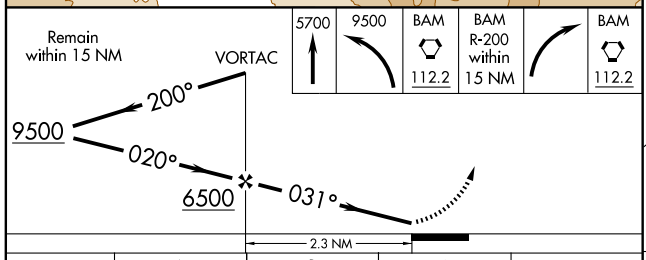
VOR-A
BATTLE MOUNTAIN (BAM)

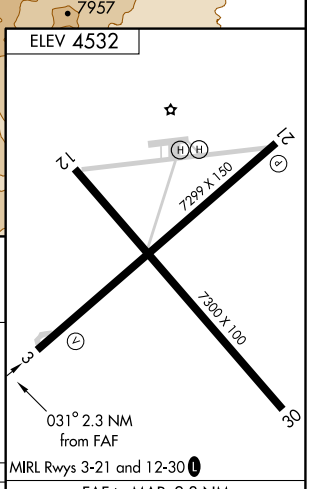
NA

MISSED APPROACH: Climb to 5700, then climbing left turn to 9500 direct BAM VORTAC and BAM R-200 within 15 miles, turn right direct BAM VORTAC and hold.

AWOS-3	SALT LAKE CITY CENTER	UNICOM
119.45	132.25 388.35	122.8 (CTAF) L







MIRL Rwys 3-21 and 12-30 L

CATEGORY	A	B	C	D
CIRCLING	5600-1¼ 1068 (1100-1¼)	5600-1½ 1068 (1100-1½)	NA	

FAF to MAP 2.3 NM					
Knots	60	90	120	150	180
Min:Sec	2:18	1:32	1:09	0:55	0:46

SW-4, 14 JAN 2010 to 11 FEB 2010

BATTLE MOUNTAIN, NEVADA

AL-534 (FAA)

VOR/DME RWY 3

BATTLE MOUNTAIN (BAM)

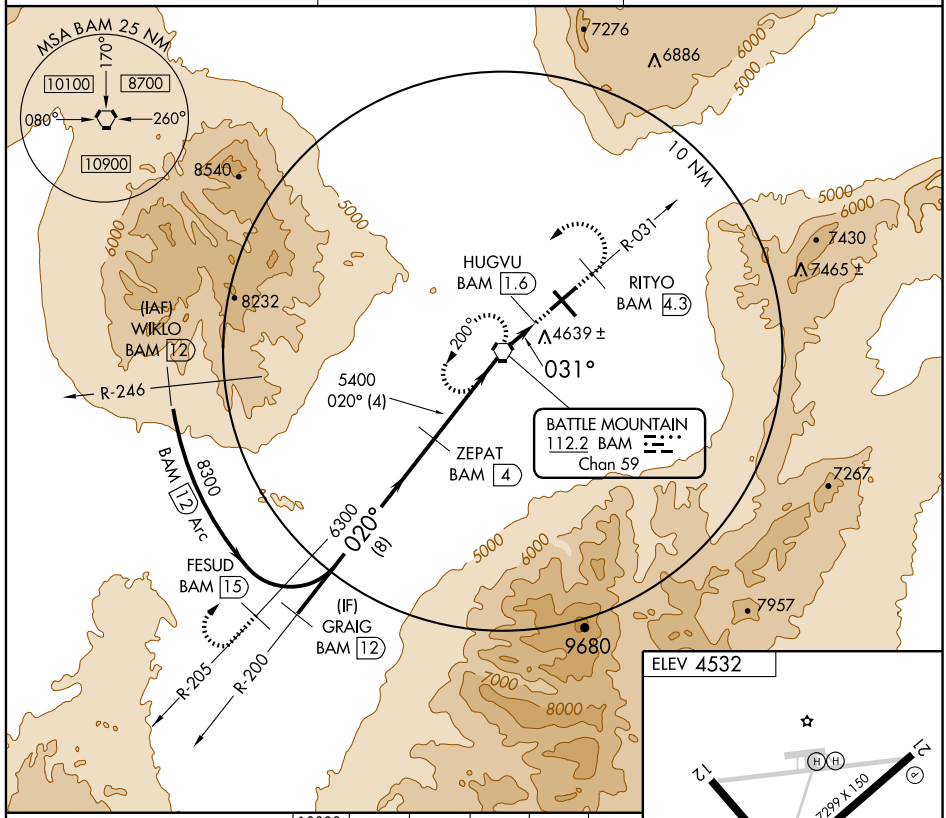
VORTAC BAM	APP CRS	Rwy ldg	7299
112.2	031°	TDZE	4531
Chan 59		Apt Elev	4532

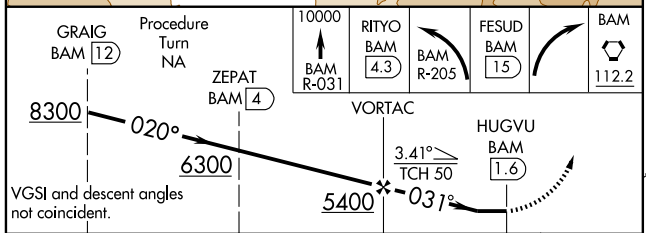
T

A NA

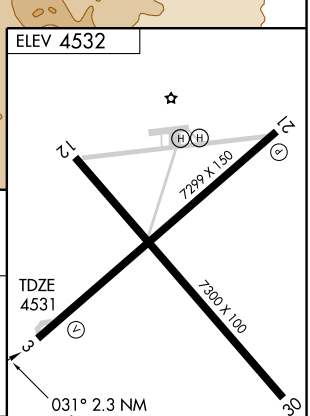
MISSED APPROACH: Climb to 10000 via BAM VORTAC R-031 to RITYO/BAM 4.3 DME and left turn direct BAM VORTAC and via BAM VORTAC R-205 to FESUD/BAM 15 DME and right turn direct BAM VORTAC and hold.

AWOS-3	SALT LAKE CITY CENTER	UNICOM
119.45	132.25 338.35	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-3	4960-1 429 (500-1)		NA	
CIRCLING	4960-1 428 (500-1)	5000-1 468 (500-1)	NA	



MIRL Rwys 3-21 and 12-30 L

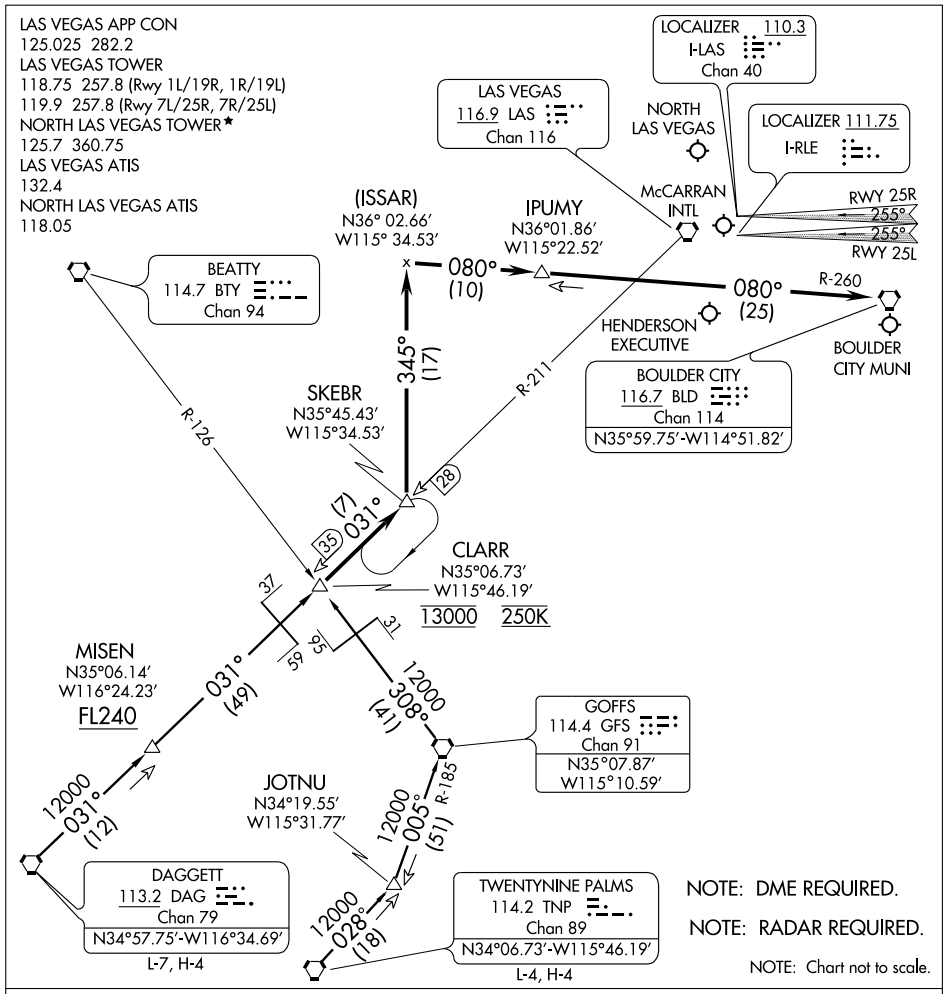
SW-4, 14 JAN 2010 to 11 FEB 2010

(CLARR.CLARR2) 09351

CLARR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



DAGGETT TRANSITION (DAG.CLARR2): From over DAG VORTAC via DAG R-031 and LAS R-211 to CLARR INT. Thence. . . .

TWENTYNINE PALMS TRANSITION (TNP.CLARR2): From over TNP VORTAC via TNP R-028 to JOTNU INT, then via GFS R-185 to GFS VORTAC, then via GFS R-308 and BTY R-126 to CLARR INT. Thence. . . .

....From over CLARR INT via LAS R-211 to SKEBR INT. Thence. . . .

LANDING MC CARRAN INTL: Via heading 345° to intercept the BLD R-260 to BLD VORTAC. Rwys 1L/R, 7L/R, and 19L/R expect radar vectors for visual approach prior to BLD VORTAC. Rwys 25L/R expect ILS approach procedure.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: After SKEBR INT expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

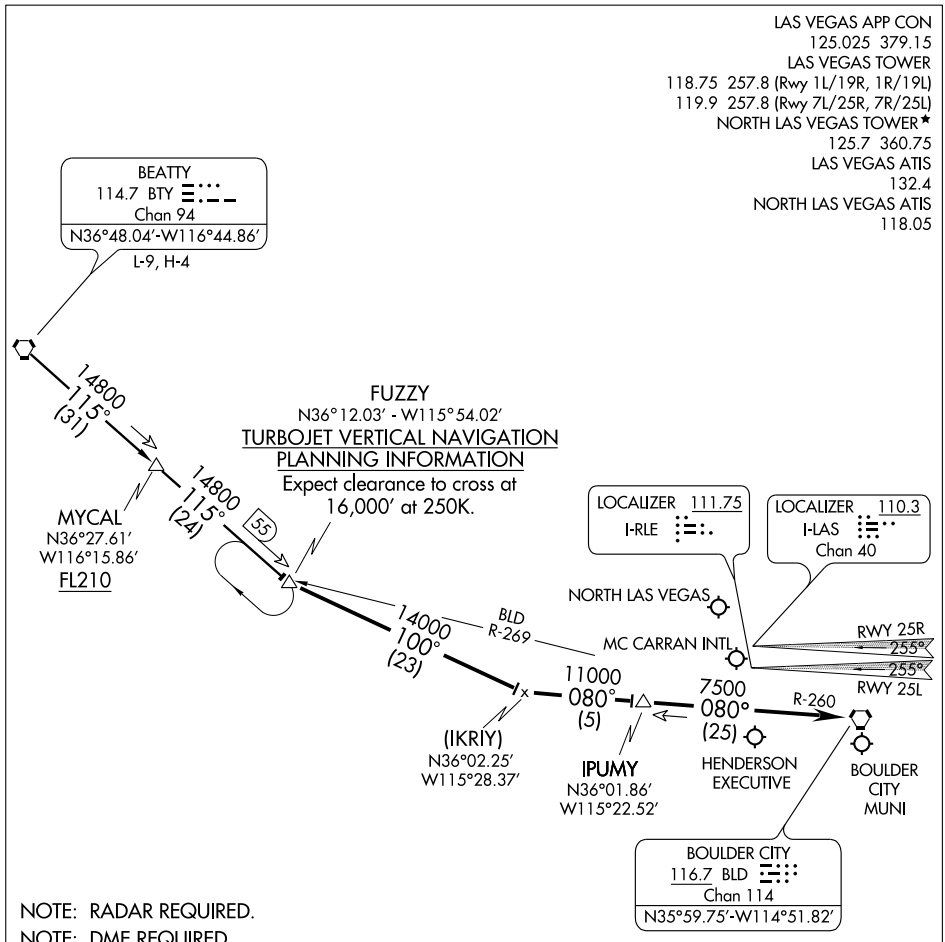
(FUZZY.FUZZY7) 09351

FUZZY SEVEN ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA

LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
NORTH LAS VEGAS TOWER★
125.7 360.75
LAS VEGAS ATIS
132.4
NORTH LAS VEGAS ATIS
118.05



NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: Chart not to scale.

BEATTY TRANSITION (BTY.FUZZY7): From over BTY VORTAC via BTY R-115 to FUZZY INT. Thence . . .

. . . From over FUZZY via heading 100° to intercept BLD R-260 to BLD VORTAC.

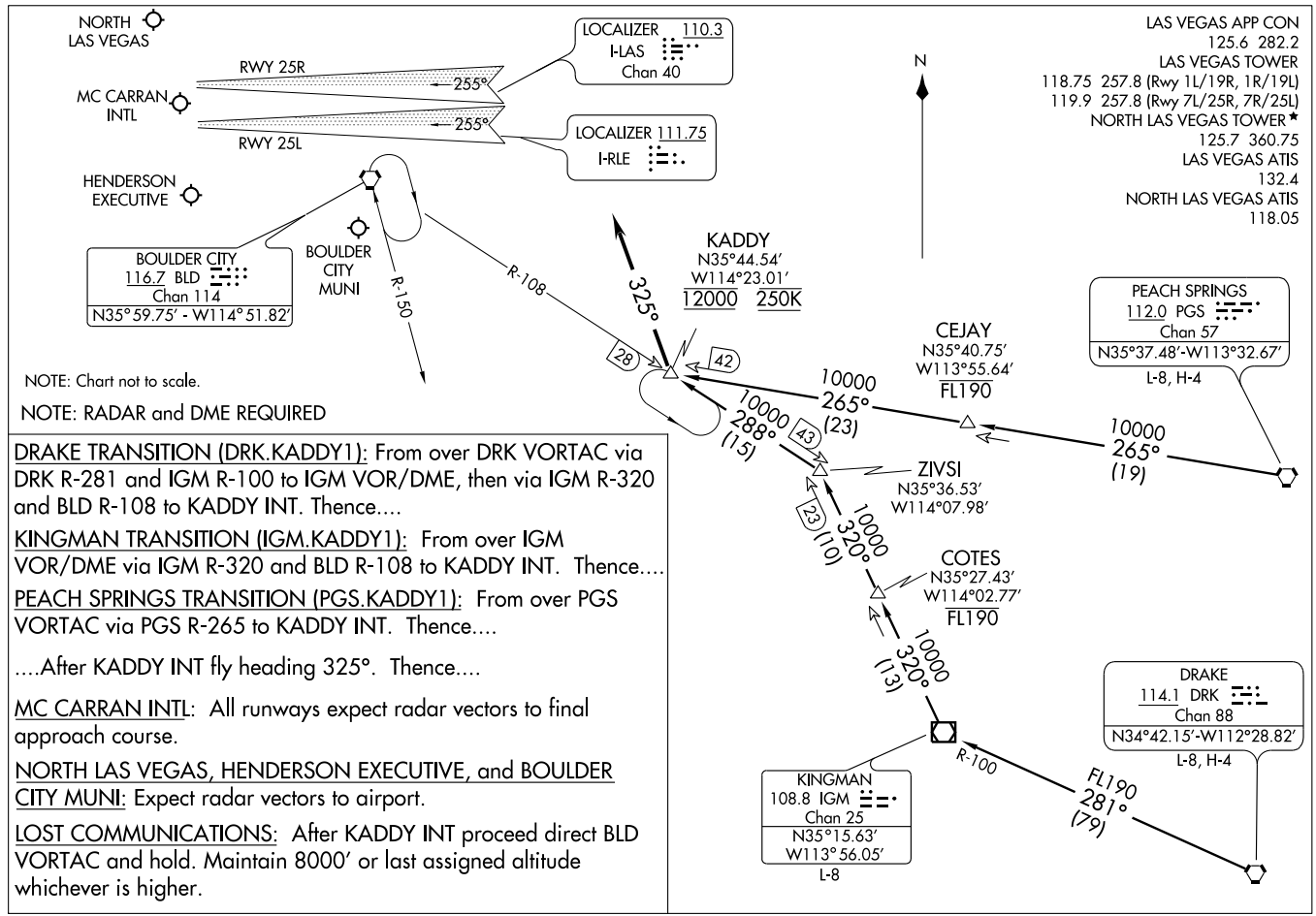
LANDING MC CARRAN INTL RWYS 1L/R, 7L/R, and 19L/R: Expect vectors for visual approach prior to BLD VORTAC.

LANDING MC CARRAN INTL RWYS 25L/R: Expect ILS approach.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI : After IPUMY, expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

KADDY ONE ARRIVAL



NOTE: Chart not to scale.

NOTE: RADAR and DME REQUIRED

DRAKE TRANSITION (DRK.KADDY1): From over DRK VORTAC via DRK R-281 and IGM R-100 to IGM VOR/DME, then via IGM R-320 and BLD R-108 to KADDY INT. Thence....

KINGMAN TRANSITION (IGM.KADDY1): From over IGM VOR/DME via IGM R-320 and BLD R-108 to KADDY INT. Thence....

PEACH SPRINGS TRANSITION (PGS.KADDY1): From over PGS VORTAC via PGS R-265 to KADDY INT. Thence....

....After KADDY INT fly heading 325°. Thence....

MC CARRAN INTL: All runways expect radar vectors to final approach course.

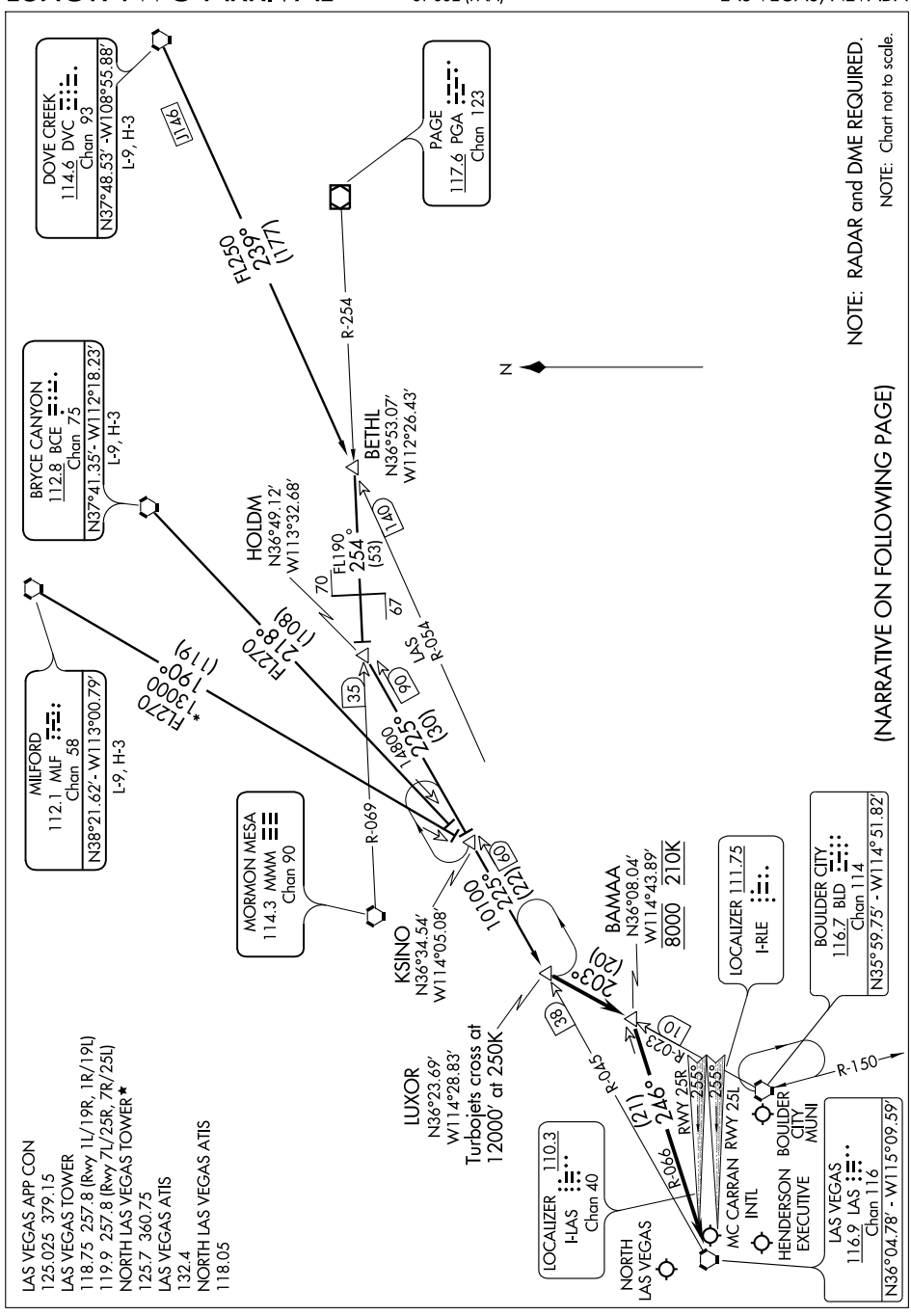
NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After KADDY INT proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

LUXOR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



ARRIVAL DESCRIPTION

BETHL TRANSITION (BETHL.LUXOR2): From over BETHL INT via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

BRYCE CANYON TRANSITION (BCE.LUXOR2): From over BCE VORTAC via BCE R-218 and LAS R-045 to LUXOR INT. Thence. . . .

DOVE CREEK TRANSITION (DVC.LUXOR2): From over DVC VORTAC via DVC R-239 and LAS R-054 to BETHL INT, then via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

MILFORD TRANSITION (MLF.LUXOR2): From over MLF VORTAC via MLF R-190 and LAS R-045 to LUXOR INT. Thence. . . .

. . . .From over LUXOR INT via BLD R-023 to BAMAA INT, thence via LAS R-066 to LAS VORTAC. Thence. . . .

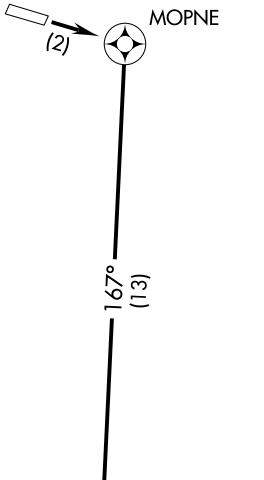
LANDING MC CARRAN INTL: All runways expect radar vectors to final approach course.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After LAS VORTAC proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

JIMPA ONE DEPARTURE (RNAV) (OBSTACLE)

AWOS-3
119.925
RENO DEP CON
119.2 279.55



TAKE-OFF MINIMUMS

Rwy 9: Standard with minimum climb of 528 feet per NM to 11400 feet.
Rwy 27: NA - Obstacles.

NOTE: 1. GPS Required.
2. RNAV 1

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 9: Climb direct MOPNE, then via 167° track to JIMPA. Continue climb-in-hold to 15000 before proceeding on course.

CARSON CITY, NEVADA

AL-6515 (FAA)

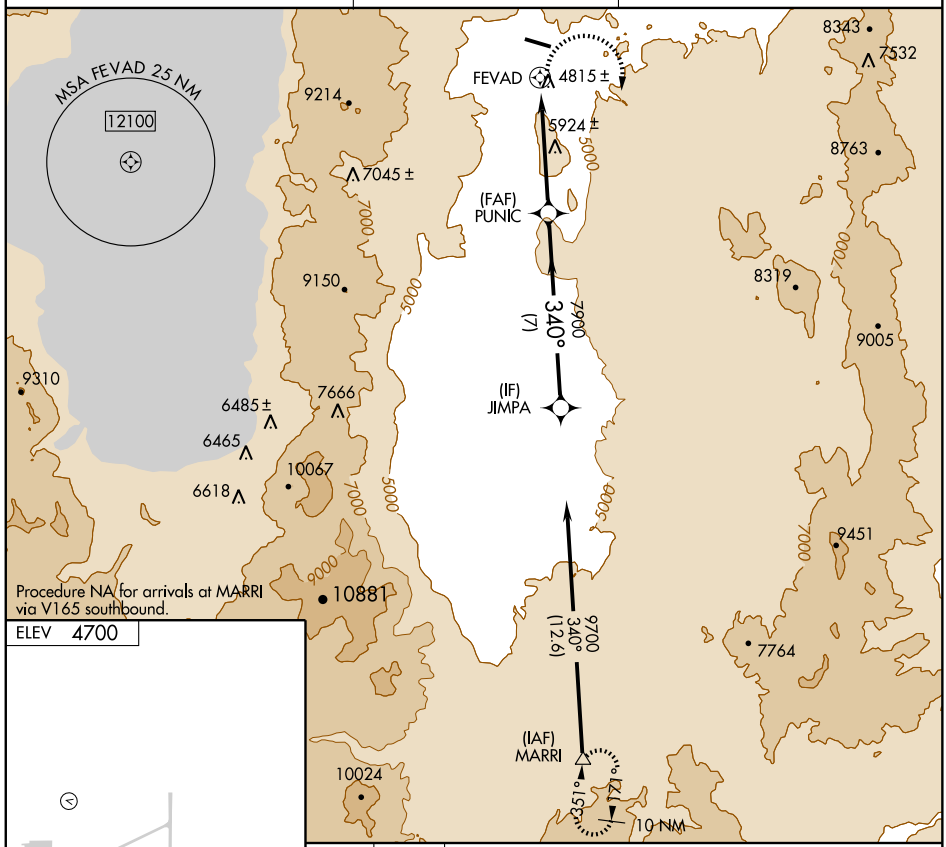
APP CRS	Rwy ldg	N/A
340°	TDZE	N/A
	Apt Elev	4700

RNAV (GPS)-A
CARSON (CXP)

When local altimeter setting not received, use Reno/Tahoe Intl altimeter setting and increase all MDAs 100 feet.
Procedure NA at night.
DME/DME RNP-0.3 NA.

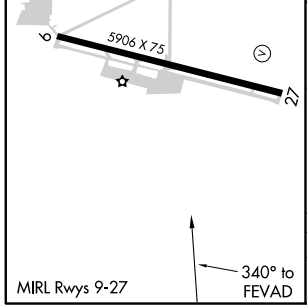
MISSED APPROACH: Climbing right turn to 13000 direct MARRI and hold, continue climb-in-hold to 13000.

AWOS-3	RENO APP CON	UNICOM
119.925	119.2 279.55	123.0 (CTAF)

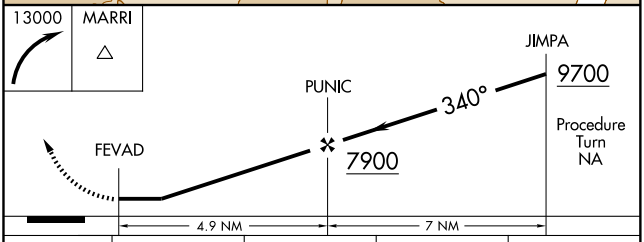


Procedure NA for arrivals at MARRI via V165 southbound.

ELEV 4700



MIRL Rwys 9-27



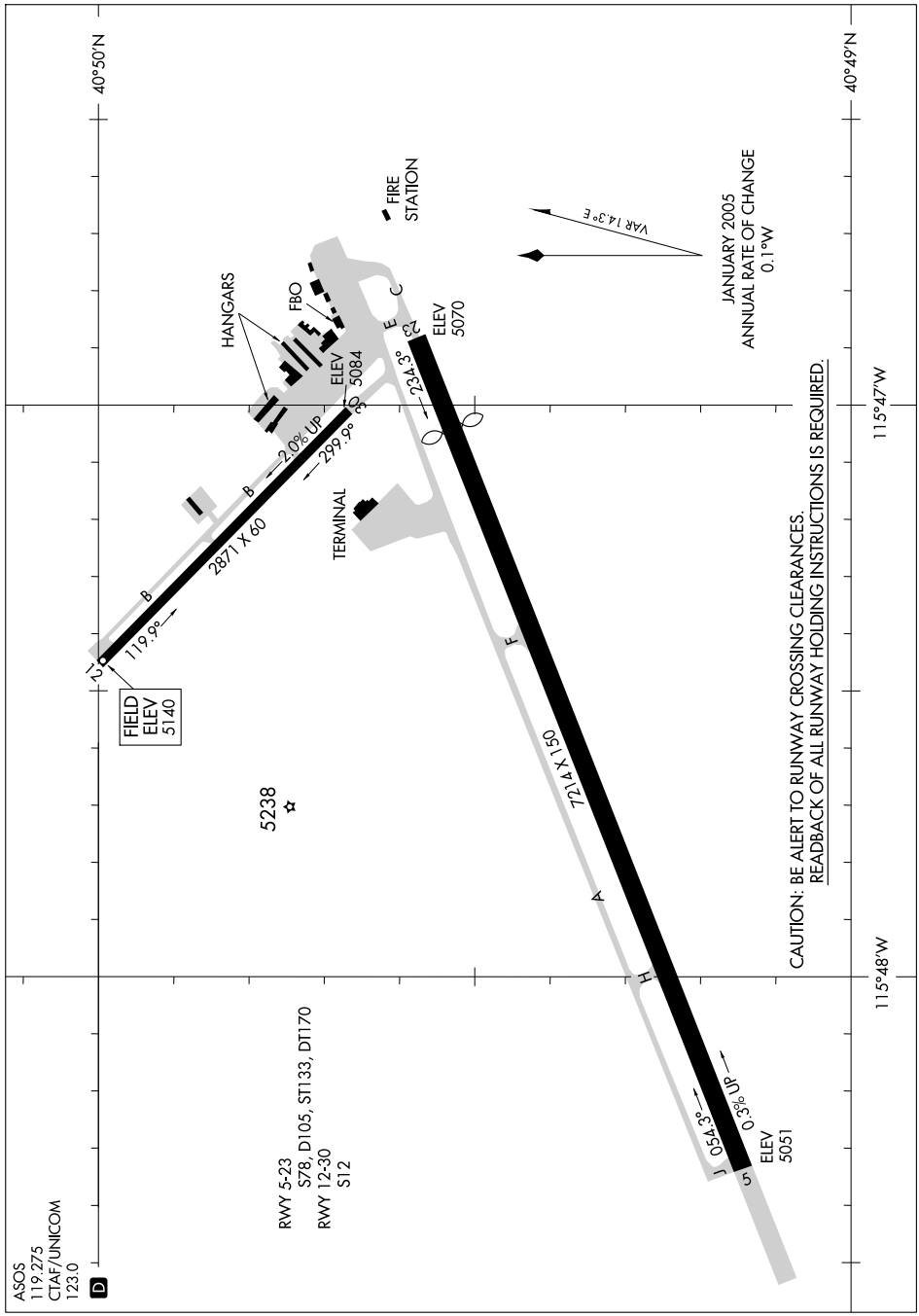
CATEGORY	A	B	C	D
CIRCLING	6380-1½ 1680 (1700-1½)		6380-3 1680 (1700-3)	6420-3 1720 (1800-3)

SW-4, 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-129 (FAA)

ELKO RGNL (EKO)
ELKO, NEVADA



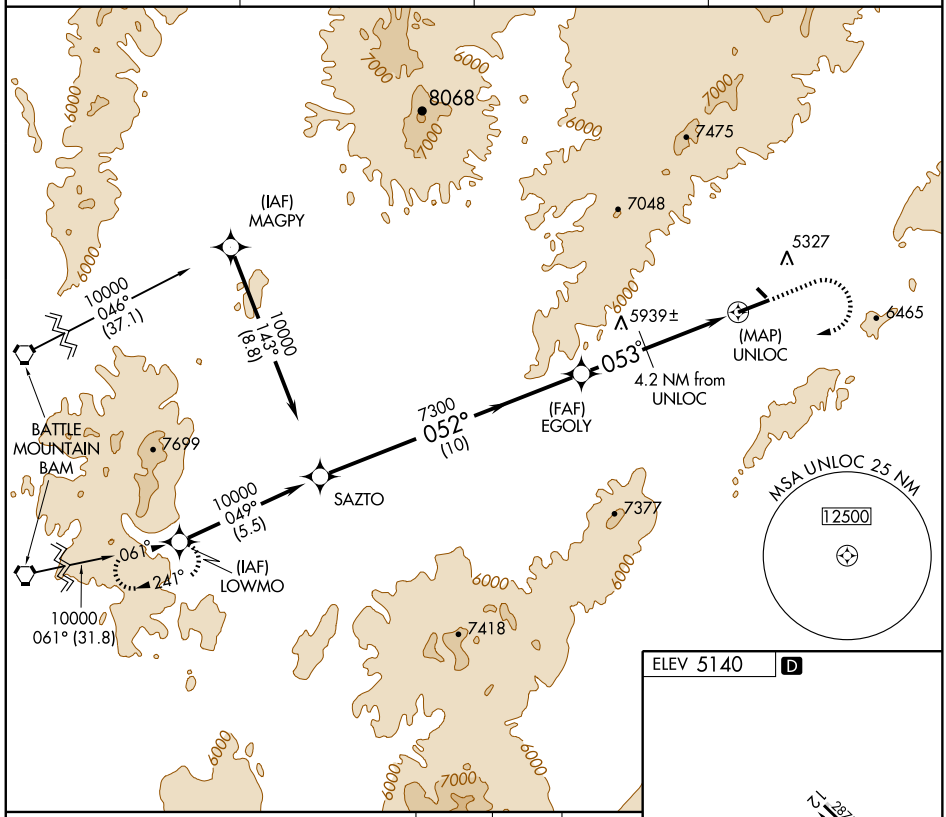
APP CRS	Rwy ldg	7214
053°	TDZE	5047
	Apt Elev	5140

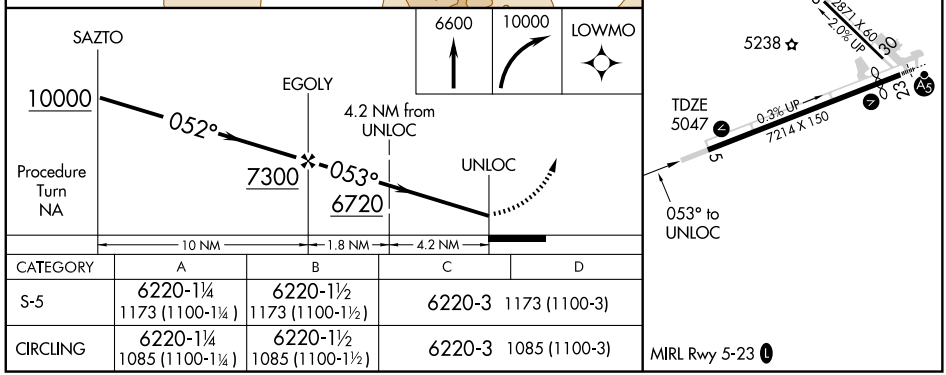
GPS RWY 5
ELKO RGNL (EKO)

T
NA

MISSED APPROACH: Climb to 6600, then climbing right turn to 10000 direct LOWMO WP and hold.

ASOS	SALT LAKE CENTER	UNICOM	
119.275	132.25 338.35	123.0 (CTAF)	122.7 L





CATEGORY	A	B	C	D
S-5	6220-1¼ 1173 (1100-1¼)	6220-1½ 1173 (1100-1½)	6220-3 1173 (1100-3)	
CIRCLING	6220-1¼ 1085 (1100-1¼)	6220-1½ 1085 (1100-1½)	6220-3 1085 (1100-3)	

SW-4. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-EKO	APP CRS	Rwy ldg	6410
108.5	239°	TDZE	5064
Chan 22		Apt Elev	5140

LDA/DME RWY 23

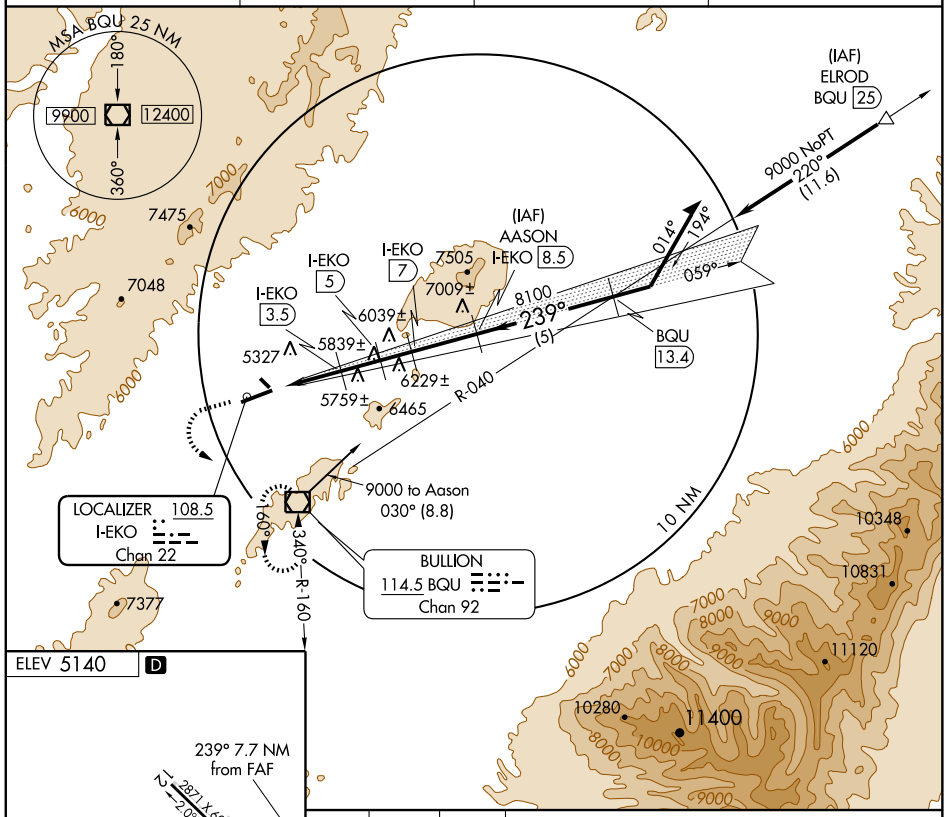
ELKO RGNL (EKO)

Inoperative table does not apply to Cat. A and B.

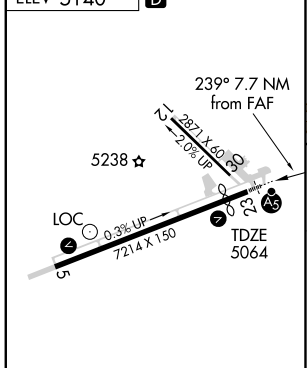
MALSR

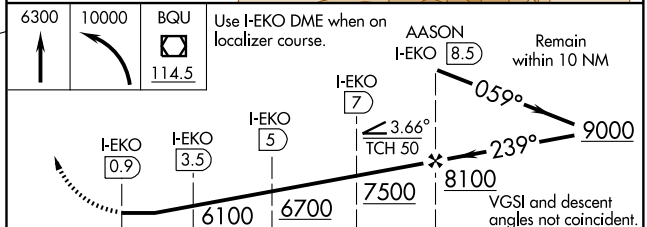
MISSED APPROACH: Climb to 6300 then climbing left turn to 10000 direct BQU VOR/DME and hold.

ASOS	SALT LAKE CENTER	UNICOM	
119.275	132.25 338.35	123.0 (CTAF)	122.7 L



ELEV 5140 D





CATEGORY	A	B	C	D
S-23	5660-1 596 (600-1)			5660-1¼ 596 (600-1¼)
CIRCLING	6020-1 880 (900-1)	6020-1¼ 880 (900-1¼)	6140-3 1000 (1000-3)	6220-3 1080 (1100-3)

MIRL Rwy 5-23 L

APP CRS	Rwy ldg	6410
241°	TDZE	5064
	Apt Elev	5140

RNAV (GPS) RWY 23

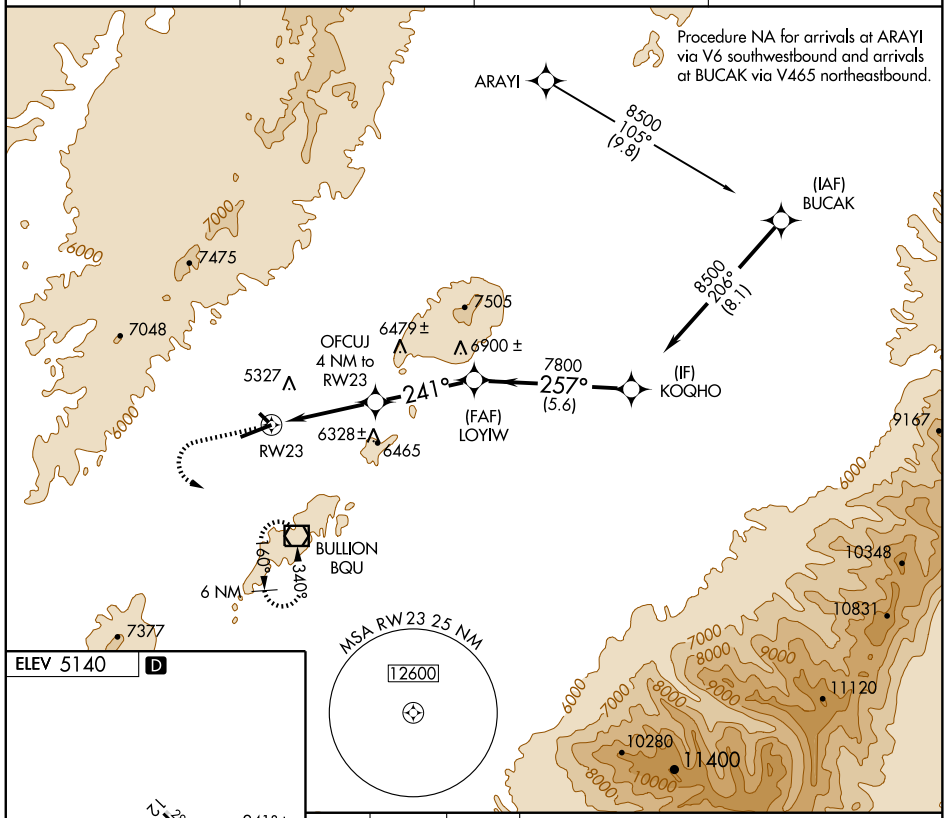
ELKO RGNL (EKO)

Inoperative table does not apply.
DME/DME RNP-0.3 NA.

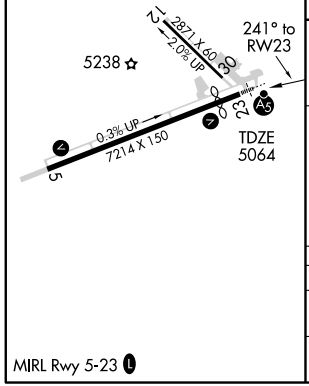
MALSR

MISSED APPROACH: Climb to 6600 then climbing left turn to 10000 direct BQU VOR/DME and hold.

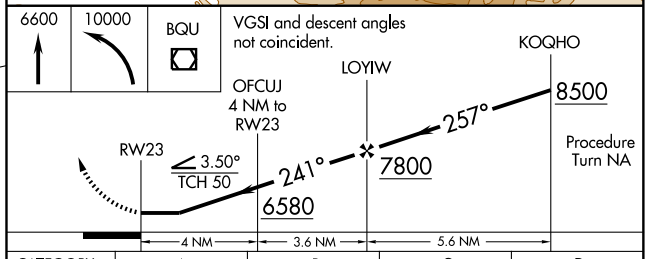
ASOS	SALT LAKE CENTER	UNICOM	
119.275	132.25 338.35	123.0 (CTAF)	122.7 L



ELEV 5140 D



MIRL Rwy 5-23 L



CATEGORY	A	B	C	D
LNAV MDA	6500-1¼ 1436 (1400-1¼)	6500-1½ 1436 (1400-1½)	6500-3 1436 (1400-3)	
CIRCLING	6500-1¼ 1360 (1400-1¼)	6500-1½ 1360 (1400-1½)	6500-3 1360 (1400-3)	

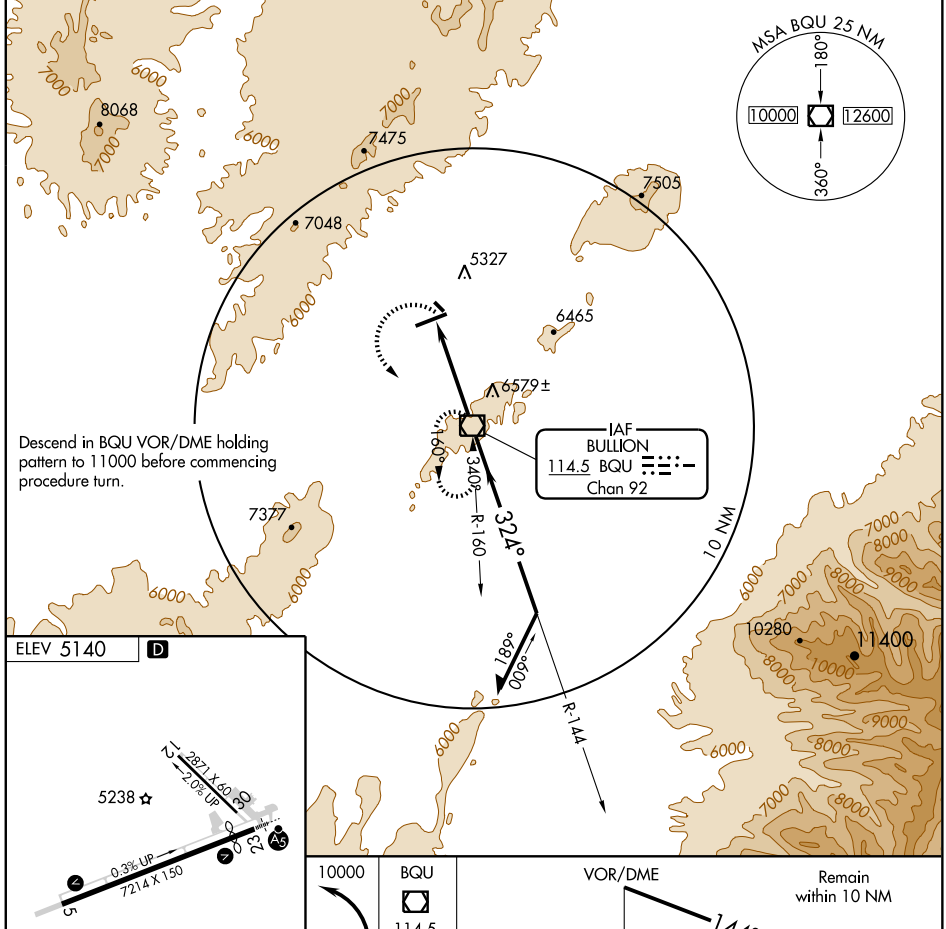
SW-4, 14 JAN 2010 to 11 FEB 2010

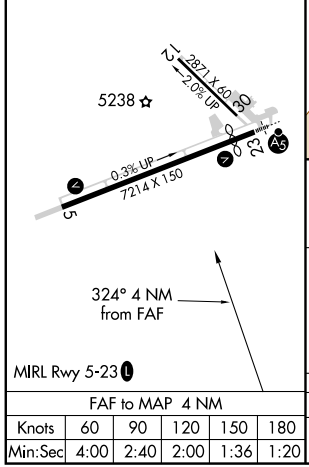
VOR/DME BQU 114.5 Chan 92	APP CRS 324°	Rwy ldg N/A TDZE N/A Apt Elev 5140

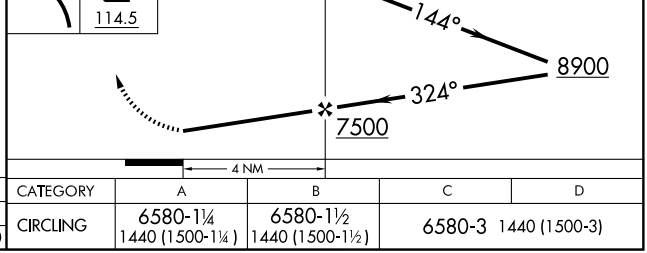
VOR-A
ELKO RGNL (EKO)

MISSED APPROACH: Climbing left turn to 10000 direct BQU VOR/DME and hold.

ASOS	SALT LAKE CENTER	UNICOM	
119.275	132.25 338.35	123.0 (CTAF)	122.7 L







FAF to MAP 4 NM					
Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20

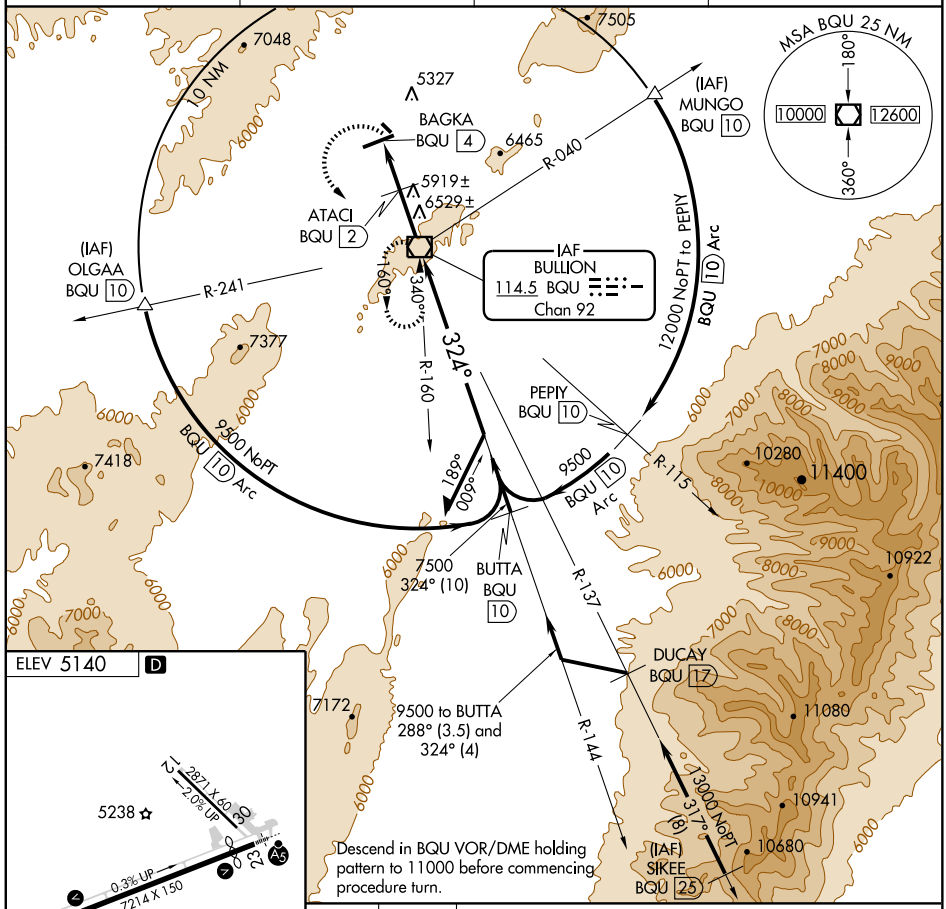
CATEGORY	A	B	C	D
CIRCLING	6580-1¼ 1440 (1500-1¼)	6580-1½ 1440 (1500-1½)	6580-3 1440 (1500-3)	

VOR/DME BQU 114.5 Chan 92	APP CRS 324°	Rwy ldg N/A TDZE N/A Apt Elev 5140

VOR/DME-B
ELKO RGNL (EKO)

MISSED APPROACH: Climbing left turn to 10000 direct BQU VOR/DME and hold.

ASOS	SALT LAKE CENTER	UNICOM	
119.275	132.25 338.35	123.0 (CTAF)	122.7 L



CATEGORY	A	B	C	D
CIRCLING	6260-1¼ 1120 (1200-1¼)	6260-1½ 1120 (1200-1½)	6260-3 1120 (1200-3)	

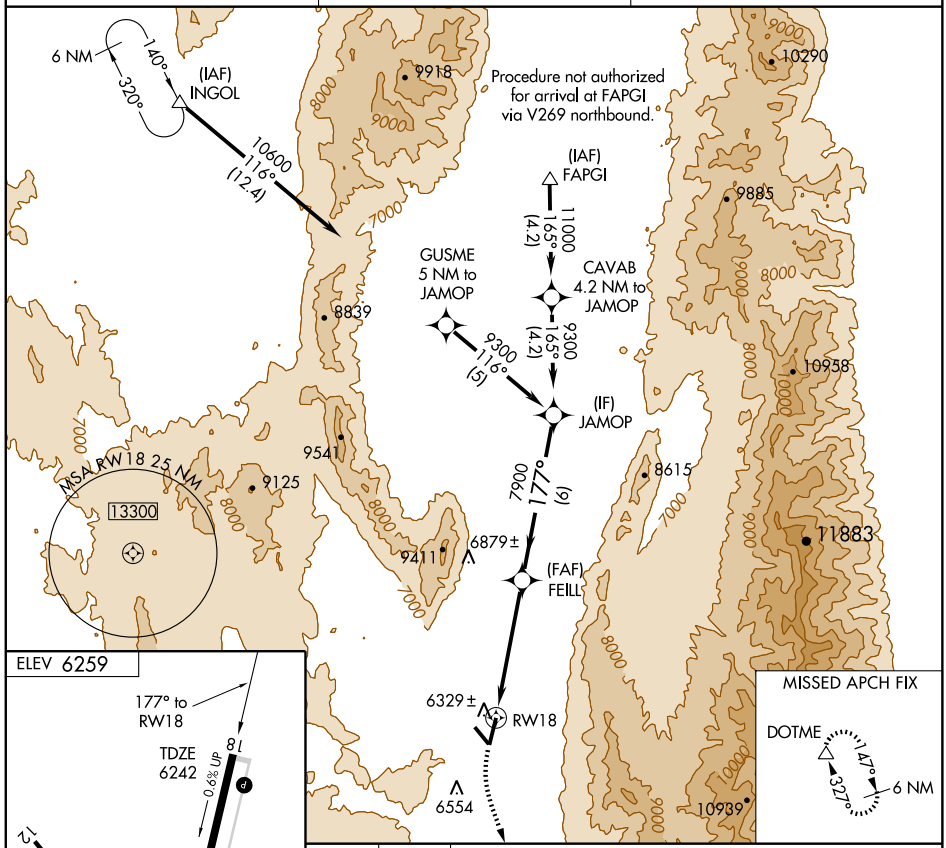
APP CRS	Rwy ldg	6018
177°	TDZE	6242
	Apt Elev	6259

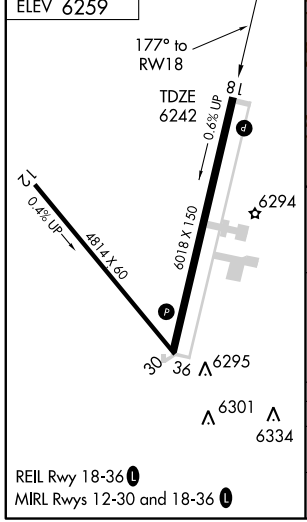
RNAV (GPS) RWY 18
ELY AIRPORT-YELLAND FIELD (ELY)

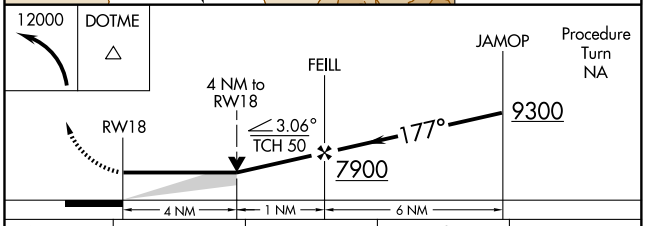
DME/DME RNP- 0.3 NA.
NA Circling NA southwest of Rwys 12 and 36.
Straight in minimums NA at night.

MISSED APPROACH: Climbing left turn to 12000 direct DOTME WP and hold.

ASOS	SALT LAKE CENTER	UNICOM
120.625	133.45 317.625	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	7540-1¼ 1298 (1300-1¼)	7540-1½ 1298 (1300-1½)	7540-3 1298 (1300-3)	
CIRCLING	7540-1¼ 1281 (1300-1¼)	7540-1½ 1281 (1300-1½)	7540-3 1281 (1300-3)	

REIL Rwy 18-36 L
MIRL Rwys 12-30 and 18-36 L

SW-4, 14 JAN 2010 to 11 FEB 2010

VOR/DME ELY	APP CRS	Rwy ldg	N/A
110.6	109°	TDZE	N/A
Chan 43		Apt Elev	6259

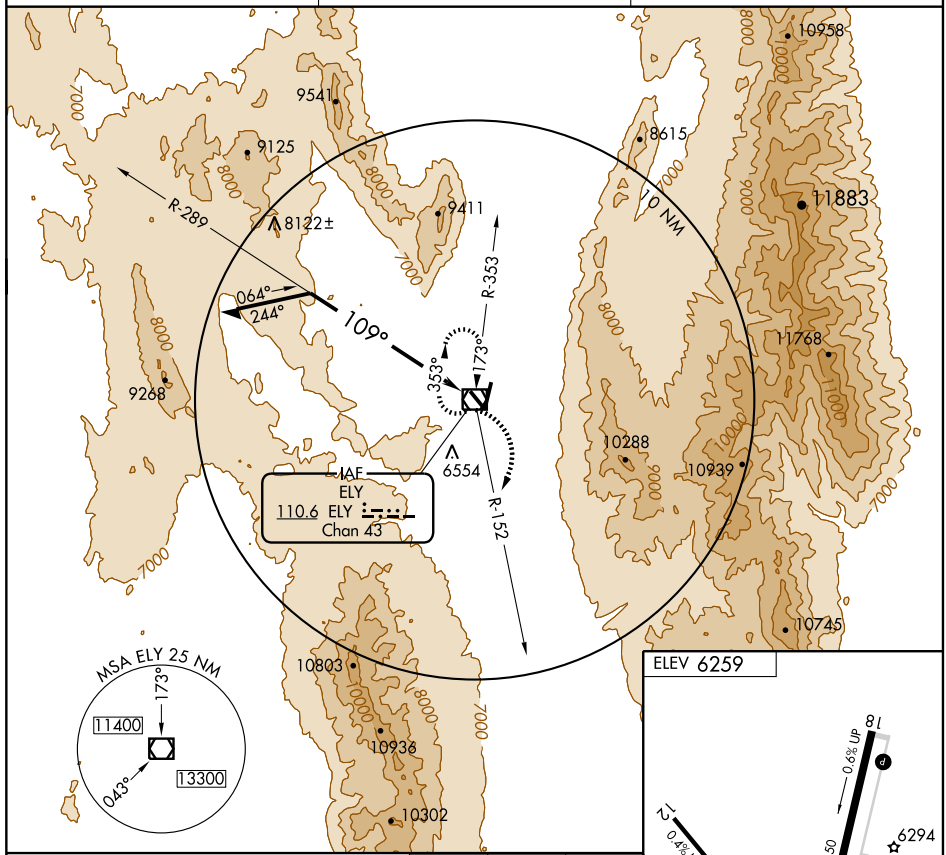
VOR-A

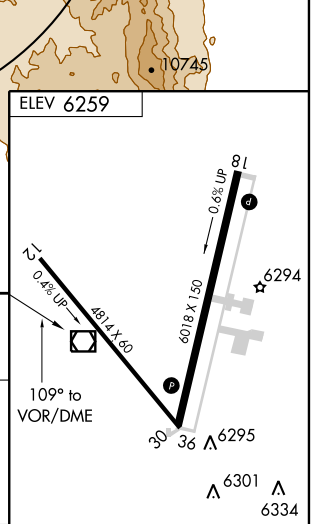
ELY AIRPORT-YELLAND FIELD (ELY)

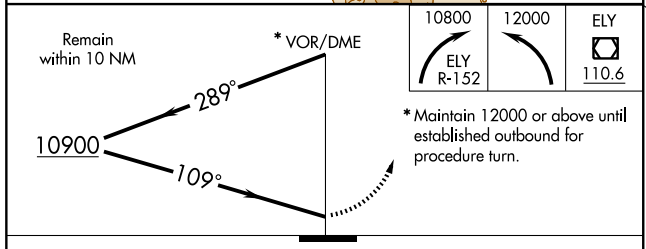
NA

MISSED APPROACH: Climbing right turn to 10800 via ELY R-152, then climbing left turn to 12000 direct ELY VOR/DME and hold.

ASOS	SALT LAKE CENTER	UNICOM
120.625	133.45 317.625	122.8 (CTAF) L







* Maintain 12000 or above until established outbound for procedure turn.

CATEGORY	A	B	C	D
CIRCLING	9400-1¼ 3141 (3200-1¼)	9400-1½ 3141 (3200-1½)	9400-3 3141 (3200-3)	

REIL Rwys 18-36 L
MIRL Rwys 12-30 and 18-36 L

SW-4. 14 JAN 2010 to 11 FEB 2010

VOR/DME ELY 110.6 Chan 43	APP CRS 179°	Rwy ldg N/A TDZE N/A Apt Elev 6259

VOR/DME-C

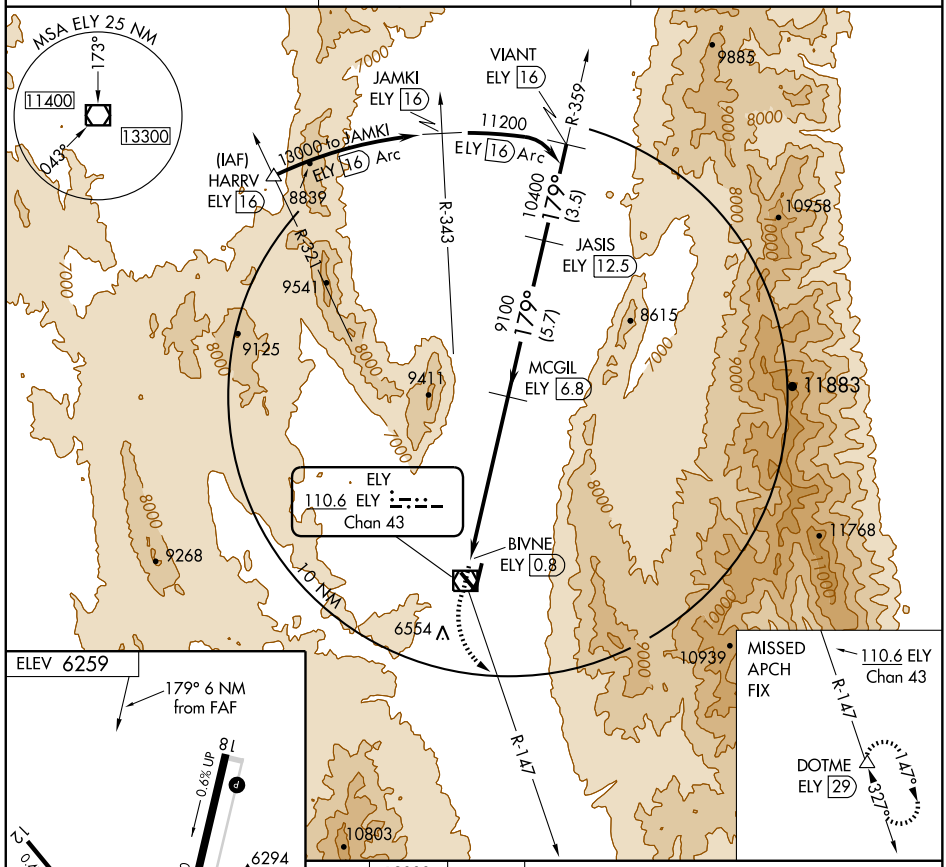
ELY AIRPORT-YELLAND FIELD (ELY)

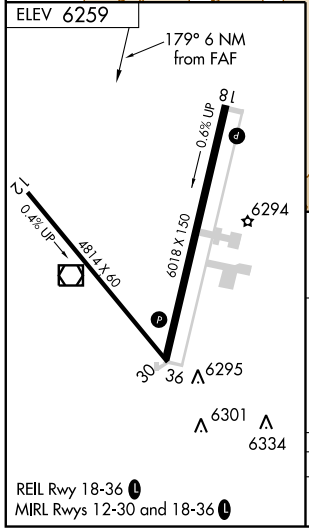
Circling not authorized southwest of Rwys 12 and 36.

NA

MISSED APPROACH: Climb to 7900 then climbing left turn to 12000 via R-147 to DOTME/ELY 29 DME and hold.

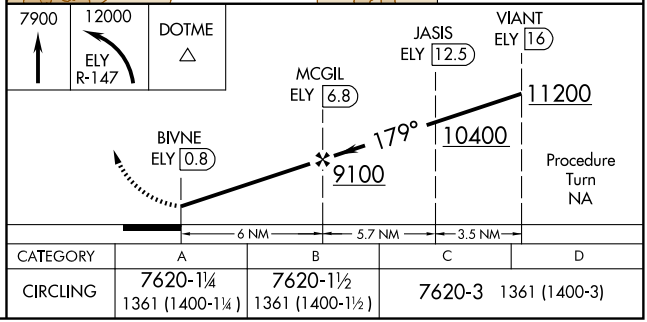
ASOS	SALT LAKE CENTER	UNICOM
120.625	133.45 317.625	122.8 (CTAF) L





REIL Rwy 18-36 L

MIRL Rwys 12-30 and 18-36 L



CATEGORY	A	B	C	D
CIRCLING	7620-1¼ 1361 (1400-1¼)	7620-1½ 1361 (1400-1½)	7620-3 1361 (1400-3)	

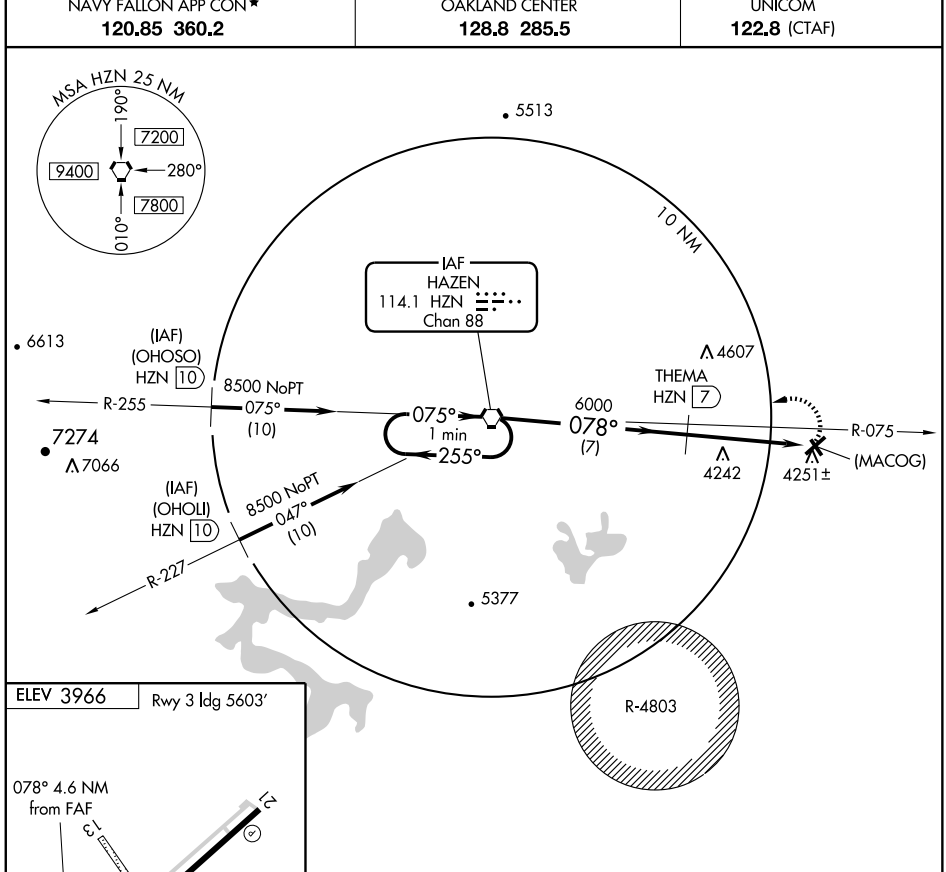
VORTAC HZN	APP CRS	Rwy ldg	N/A
114.1	078°	TDZE	N/A
Chan 88		Apt Elev	3966

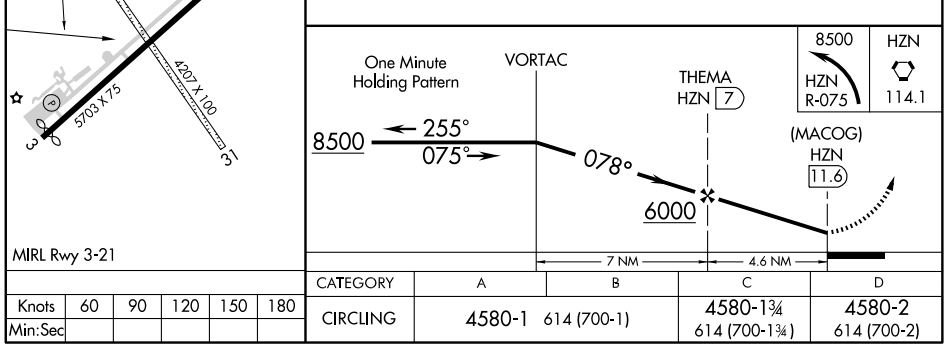
VOR/DME or GPS-B
FALLON MUNI (FLX)

Use NAS Fallon altimeter setting; when not available, procedure not authorized.
NA Contact Fallon Approach Control for approach clearance, if unable contact Oakland ARTCC.

MISSED APPROACH: Climbing left turn to 8500 via R-075 to HZN VORTAC and hold, continue climb-in-hold to 8500.

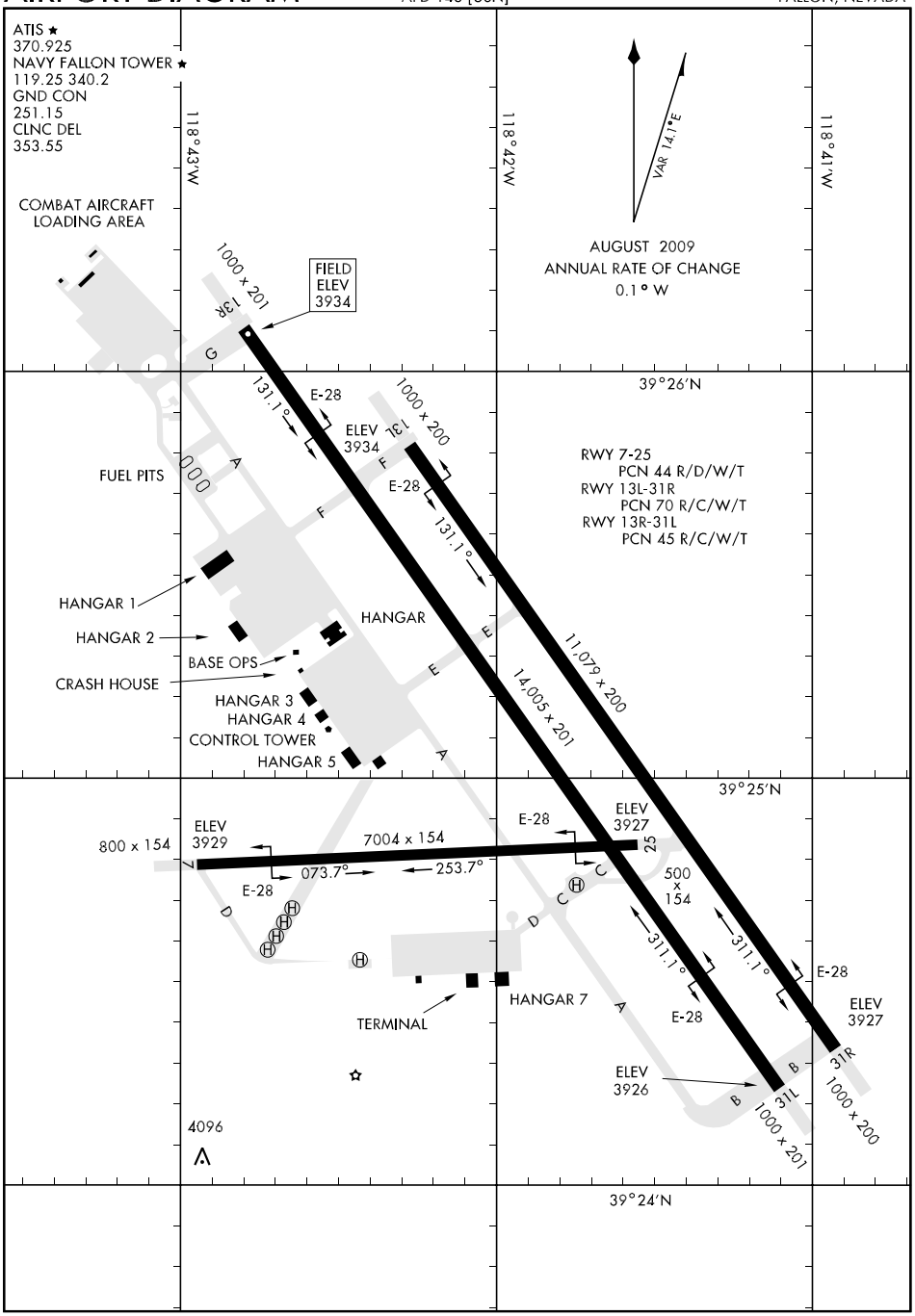
NAVY FALLON APP CON*	OAKLAND CENTER	UNICOM
120.85 360.2	128.8 285.5	122.8 (CTAF)





Knots	60	90	120	150	180
Min:Sec					

CATEGORY	A	B	C	D
CIRCLING	4580-1 614 (700-1)		4580-1¾ 614 (700-1¾)	4580-2 614 (700-2)


ATIS ★
370.925
NAVY FALLON TOWER ★
119.25 340.2
GND CON
251.15
CLNC DEL
353.55
COMBAT AIRCRAFT LOADING AREA
118°43'W
118°42'W
118°41'W
VAR 14.1°E
AUGUST 2009
ANNUAL RATE OF CHANGE
0.1° W
FIELD ELEV 3934
1000 x 201
13R
31L
G
131.1°
E-28
ELEV 3934
1000 x 200
39°26'N
RWY 7-25
PCN 44 R/D/W/T
RWY 13L-31R
PCN 70 R/C/W/T
RWY 13R-31L
PCN 45 R/C/W/T
FUEL PITS
A
F
E
HANGAR 1
HANGAR 2
HANGAR
BASE OPS
CRASH HOUSE
HANGAR 3
HANGAR 4
CONTROL TOWER
HANGAR 5
11,079 x 200
14,005 x 201
39°25'N
ELEV 3929
800 x 154
7004 x 154
7
25
073.7°
253.7°
ELEV 3927
C
D
500 x 154
311.1°
TERMINAL
HANGAR 7
ELEV 3926
B
31R
31L
1000 x 200
1000 x 201
4096
39°24'N

HI-TACAN RWY 13R

TACAN NFL Chan 82	APCH CRS 139°	Rwy ldg 14,005 TDZE 3934 Arpt Elev 3934	JAL-143 [USN]	FALLON NAS (VAN VOORHIS FLD) (KNFL)

* MISSED APPROACH: Turn left, climb to 9000 on NFL TACAN R-115 to 20 DME (MUFIT).

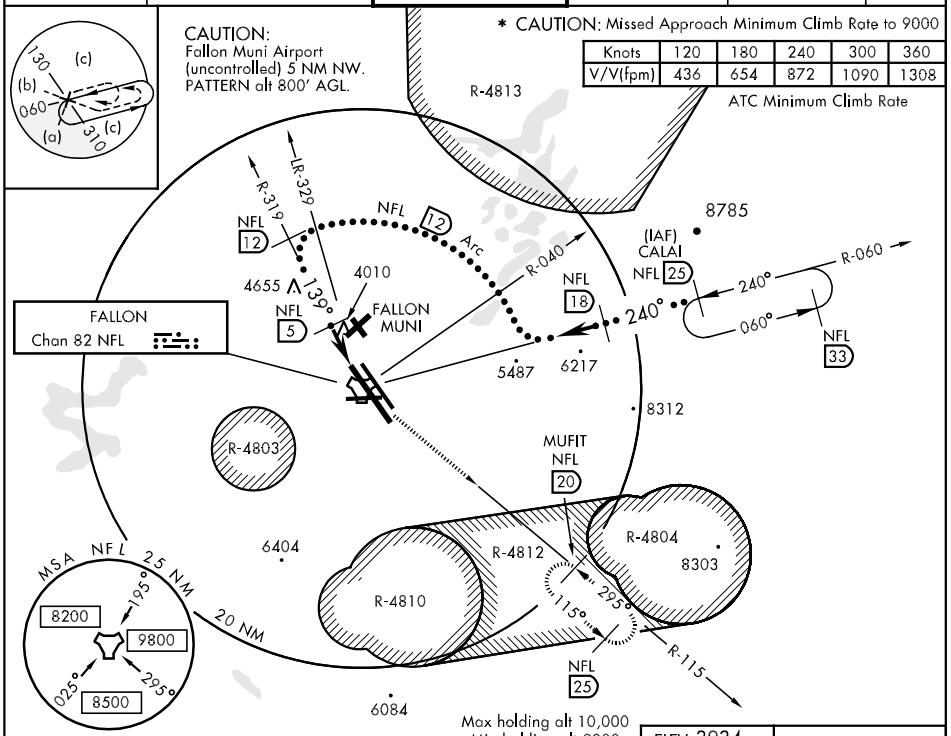
ATIS *	NAVY FALLON APP CON	NAVY FALLON TOWER*	GND CON	CLNC DEL	ASR/PAR
370.925	120.85 360.2	119.25 340.2	251.15	353.55	

CAUTION:
Fallon Muni Airport (uncontrolled) 5 NM NW. PATTERN alt 800' AGL.

* CAUTION: Missed Approach Minimum Climb Rate to 9000

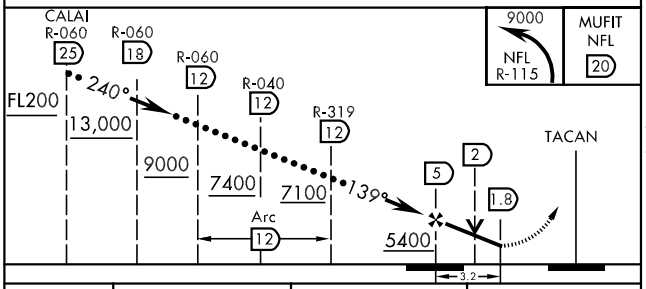
Knots	120	180	240	300	360
V/V(fpm)	436	654	872	1090	1308

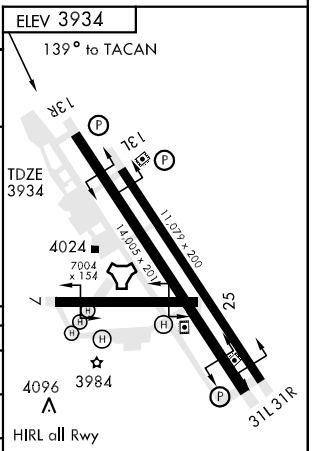
ATC Minimum Climb Rate



Max holding alt 10,000
Min holding alt 9000

EMERG SAFE ALT 100 NM 15,600





CATEGORY	C	D	E
S-13R	4360-1¼ 426 (500-1¼)		4360-1½ 426 (500-1½)
CIRCLING	4400-1½ 466 (500-1½)	4520-2 586 (600-2)	4980-3 1046 (1100-3)
S-PAR 13R	4134-¾ 200 (200-¾) GS 3.0		

SW-4, 14 JAN 2010 to 11 FEB 2010

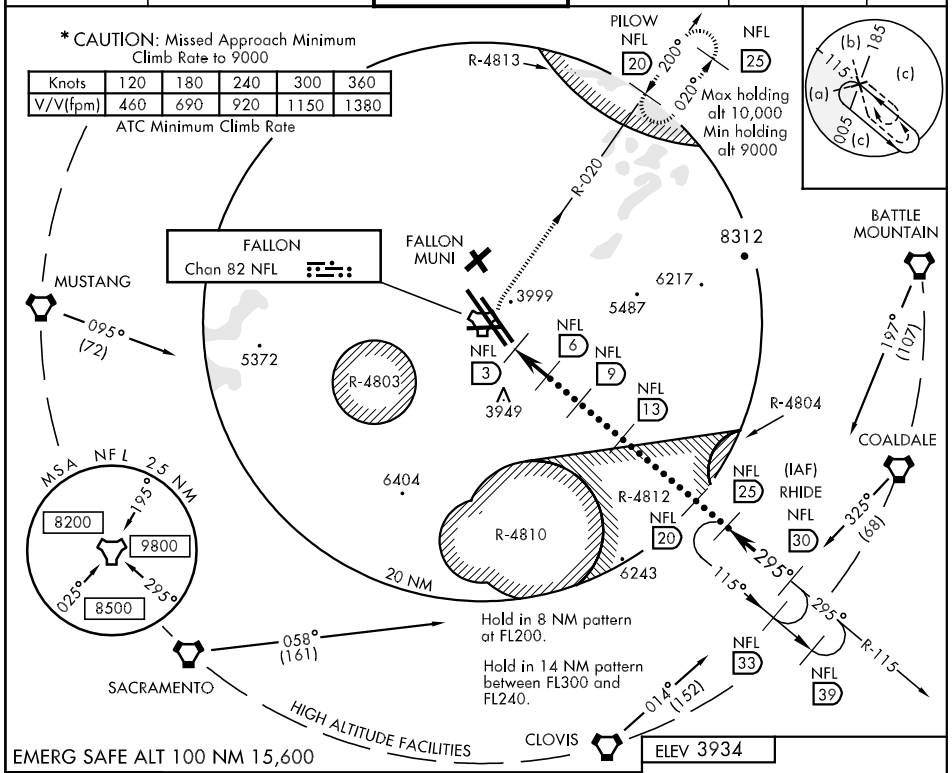
HI-TACAN RWY 31 L/R

TACAN NFL Chan 82	APCH CRS 295°	Rwy ldg 31L 14,005 31R 11,079 TDZE 31L 3926 31R 3928 Arpt Elev 3934	JAL-143 [USN] FALLON NAS (VAN VOORHIS FLD) (KNFL)

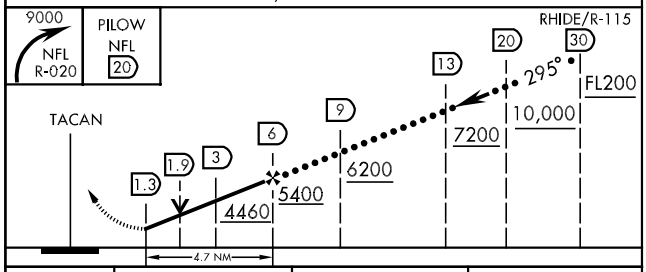
T

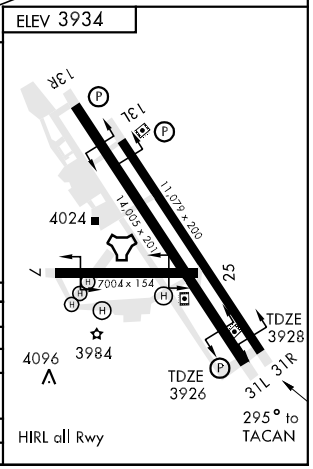
* MISSED APPROACH: Climbing right turn to 9000 on NFL TACAN R-020 to 20 DME (PILOW).

ATIS ★	NAVY FALLON APP CON	NAVY FALLON TOWER★	GND CON	CLNC DEL	ASR/PAR
370.925	120.85 360.2	119.25 340.2	251.15	353.55	



EMERG SAFE ALT 100 NM 15,600





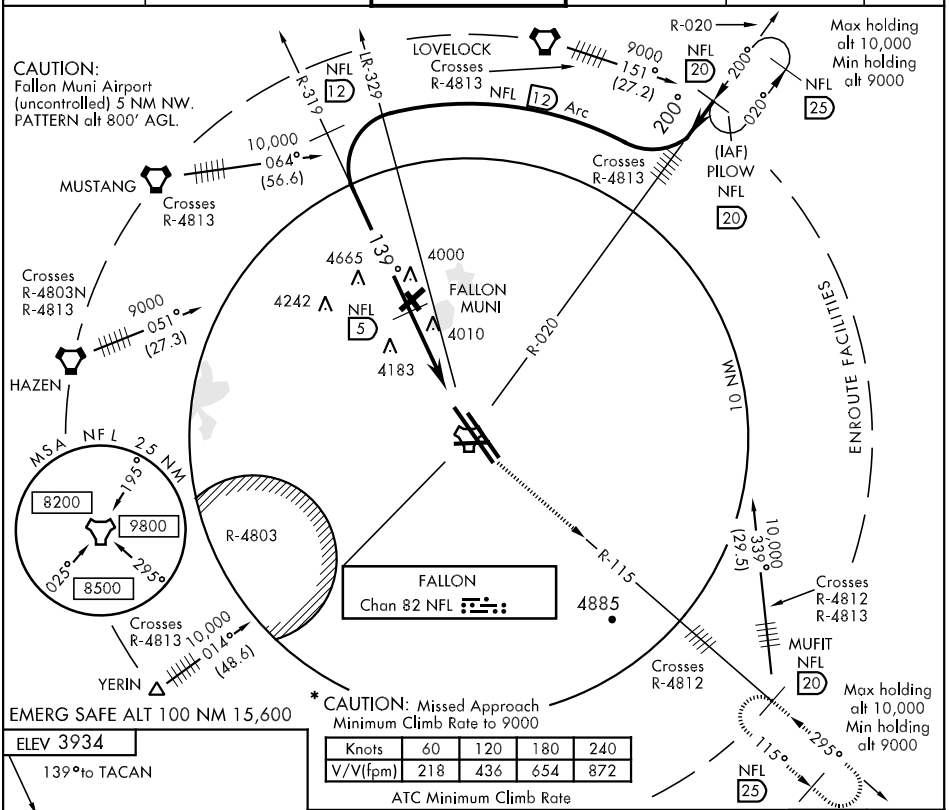
CATEGORY	C	D	E
S-31L	4200-1 274 (300-1)		
S-31R	4200-1 272 (300-1)		
CIRCLING	4400-1½ 466 (500-1½)	4520-2 586 (600-2)	4980-3 1046 (1100-3)
S-PAR 31L	4126-¾ 200 (200-¾) GS 3.5°		
S-PAR 31R	4128-¾ 200 (200-¾) GS 3.5°		

TACAN RWY 13R

TACAN NFL Chan 82	APCH CRS 139°	Rwy ldg 14,005 TDZE 3934 Arpt Elev 3934	AL-143 [USN]	FALLON NAS (VAN VORRHIS FLD) (KNFL)

* MISSED APPROACH: Turn left, climb to 9000 on NFL TACAN R-115 20 DME (MUFIT).

ATIS ★	NAVY FALLON APP CON	NAVY FALLON TOWER★	GND CON	CLNC DEL	ASR/PAR
370.925	120.85 360.2	119.25 340.2	251.15	353.55	



Knots	60	120	180	240
V/V(fpm)	218	436	654	872

ATC Minimum Climb Rate

CATEGORY	A	B	C	D
S-13R	4360-1 426 (500-1)		4360-1¼ 426 (500-1¼)	
CIRCLING	4400-1 466 (500-1)		4400-1½ 466 (500-1½)	4500-2 586 (600-2)
S-PAR 13R	4134-¾ 200 (200-¾) GS 3.0°			

SW-4, 14 JAN 2010 to 11 FEB 2010

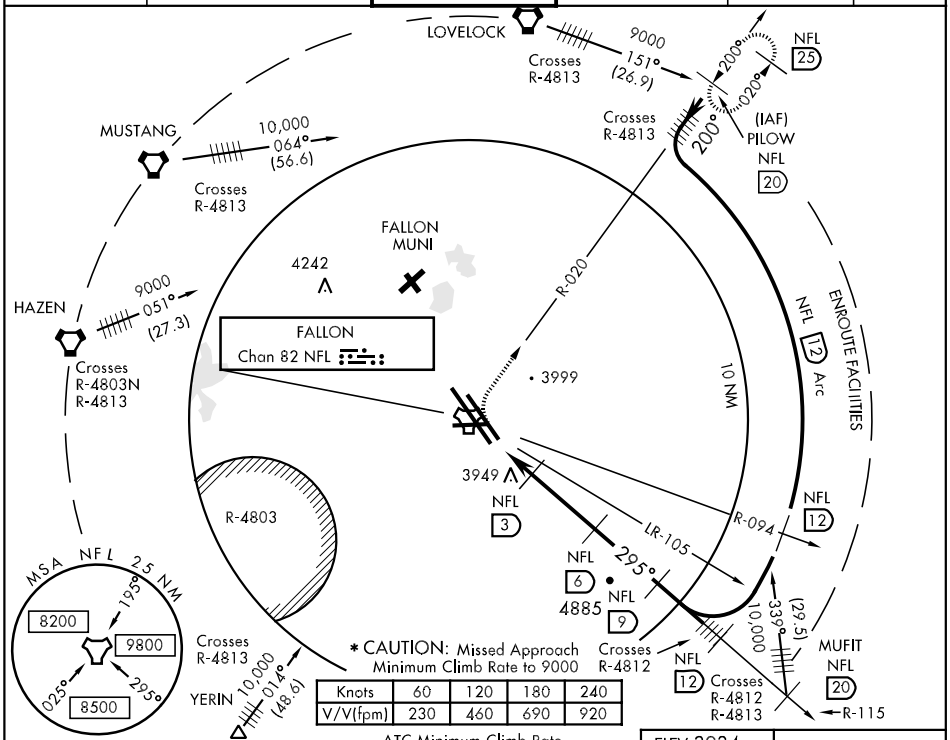
TACAN Y RWY 31L/R

TACAN NFL Chan 82	APCH CRS 295°	Rwy ldg 31L 14,005 31R 11,079 TDZE 31L 3926 31R 3928 Arpt Elev 3934	AL-143 [USN] FALLON NAS (VAN VOORHIS FLD) (KNFL)

T

* MISSED APPROACH: Climbing right turn to 9000 on NFL TACAN R-020 to 20 DME (PILOW)

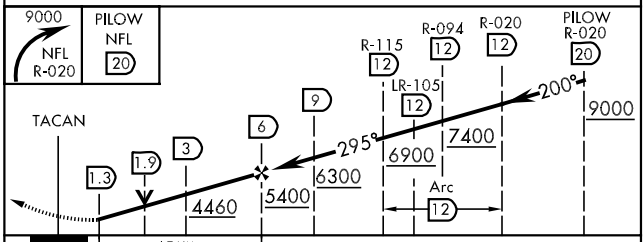
ATIS *	NAVY FALLON APP CON	NAVY FALLON TOWER *	GND CON	CLNC DEL	ASR/PAR
370.925	120.85 360.2	119.25 340.2	251.15	353.55	



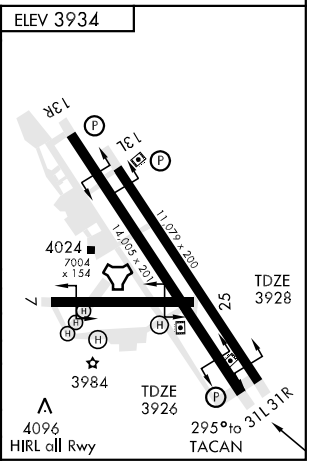
Knots	60	120	180	240
V/V(fpm)	230	460	690	920

ATC Minimum Climb Rate

EMERG SAFE ALT 100 NM 15,600



CATEGORY	A	B	C	D
S-31L	4200-1 274 (300-1)			
S-31R	4200-1 272 (300-1)			
CIRCLING	4400-1 466 (500-1)		4400-1½ 466 (500-1½)	4520-2 586 (600-2)
S-PAR 31L	4126-¾ 200 (200-¾) GS 3.5°			
S-PAR 31R	4128-¾ 200 (200-¾) GS 3.5°			

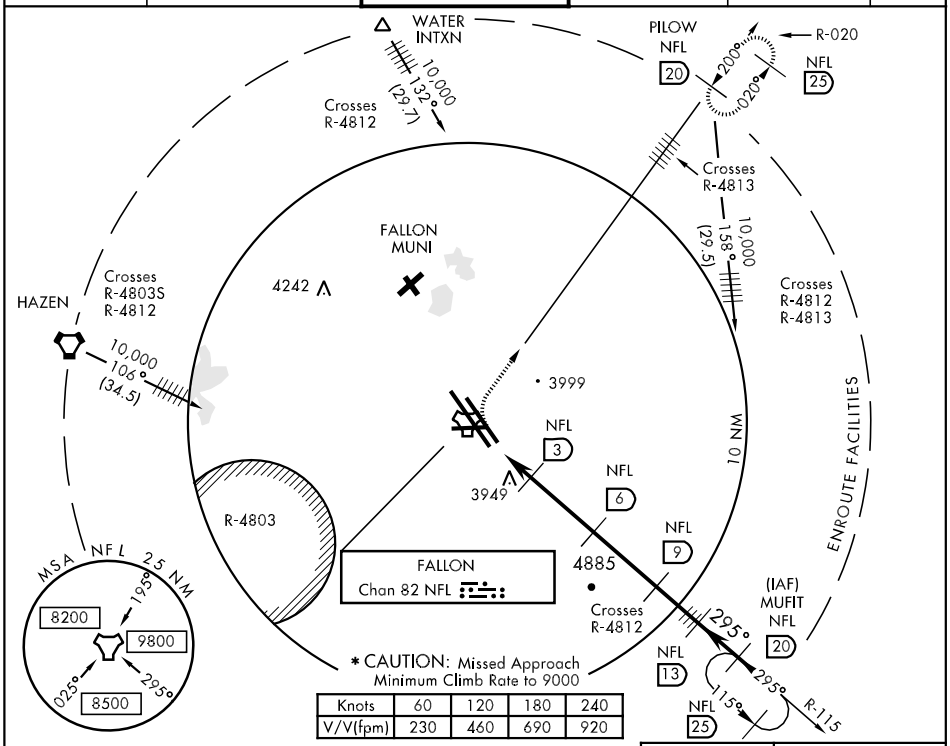


TACAN Z RWY 31L/R

TACAN NFL Chan 82	APCH CRS 295°	Rwy ldg 31L 14,005 31R 11,079 TDZE 31L 3926 31R 3928 Arpt Elev 3934	AL-143 [USN] FALLON NAS (VAN VOORHIS FLD) (KNFL)

∗ MISSED APPROACH: Climbing right turn to 9000 on NFL TACAN R-020 to 20 DME (PILOW).

ATIS ★	NAVY FALLON APP CON	NAVY FALLON TOWER ★	GND CON	CLNC DEL	ASR/PAR
370.925	120.85 360.2	119.25 340.2	251.15	353.55	

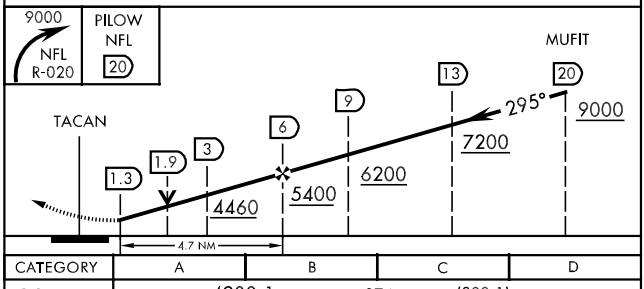


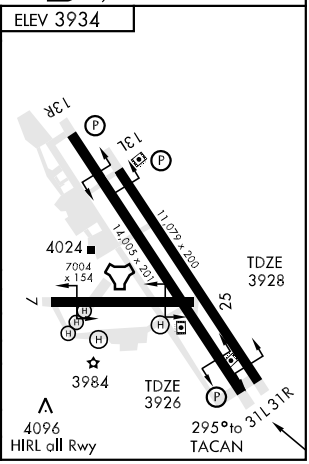
Knots	60	120	180	240
V/V(fpm)	230	460	690	920

ATC Minimum Climb Rate

EMERG SAFE ALT 100 NM 15,600

ELEV 3934





CATEGORY	A	B	C	D
S-31L	4200-1 274 (300-1)			
S-31R	4200-1 272 (300-1)			
CIRCLING	4400-1 466 (500-1)		4400-1½ 466 (500-1½)	4520-2 586 (600-2)
S-PAR 31L	4126-¾ 200 (200-¾) GS 3.5°			
S-PAR 31R	4128-¾ 200 (200-¾) GS 3.5°			

ATIS ★
370.925
CLNC DEL
353.55
GND CON
251.15
NAVY FALLON TOWER ★
119.25 340.2
NAVY FALLON APP/DEP CON
120.85 360.2

LAKEVIEW
112.0 LKV
Chan 57
N42°29.57′
W120°30.43′
L-11, H-3

LOVELOCK
116.5 LLC
Chan 112
N40°07.49′
W118°34.66′
L-9-11, H-3

Acft unable to make ATC climb gradient advise ATC prior to departure.

MUSTANG
117.9 FMG
Chan 126
N39°31.88′
W119°39.36′
L-9, H-3

MSA NFL 25 NM
195°
8200
9800
025°
295°
8500

R-137
R-219
039° (10)
R-4813
37
321° (184)
340° (25)
R-321
290° (8)
36
9000
(7)
247°
WATER
N39°36.99′
W118°43.38′
12
228° (8)
6
9000
R-067
HAZEN
114.1 HZN
Chan 88
N39°30.99′
W118°59.86′
L-9, H-3
R-048
340°
R-340
FALLON MUNI
4665
4183
010°
310°
1.5
2.5
4662
FALLON
Chan 82 NFL
N39°25.01′
W118°42.31′
R-190
CHURCHILL HIGH/LOW MOA
R-4803
EMERG SAFE ALT 100NM 15,600
① 4.36NM from Rwy 7

Rwy	Knots	60	120	180	240	300	360
* 7 ⓐ	V/V(fpm)	255	510	765	1020	1275	1530
† 7/25 ⓑ	V/V(fpm)	210	420	630	840	1050	1260
†31L/R ⓑⓒ	V/V(fpm)	270	540	810	1080	1350	1620

* Minimum Military and Civil † ATC Climb Rate

ⓐ To 4900.

ⓑ MUSTANG TRANSITION to 9000.

ⓒ HAZEN TRANSITION to 9000.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 7: Turn left heading 310° to join and fly NFL R-340 to WATER. (Right turn-out not authorized)

TAKE-OFF RWY 13L/R: Climb on runway heading to NFL 2.5 DME, turn right to join and fly NFL R-190 to NFL, NFL R-340 to WATER.

TAKE-OFF RWY 25: Turn right heading 010° to join and fly NFL R-340 to WATER. (Left turn-out not authorized.)

TAKE-OFF RWY 31L/R: Climb on runway heading to NFL 1.5 DME, turn right to join and fly NFL R-340 to WATER.

(CONTINUED NEXT PAGE)

(CONTINUED FROM PRECEEDING PAGE)

DEPARTURE ROUTE DESCRIPTION

HAZEN TRANSITION (WATER4·HZN): Fly HZN R-048 to HZN. Cross HZN R-048/6 DME at or above 9000.

LAKEVIEW TRANSITION (WATER4·LKV): Turn left heading 290° to join and fly NFL R-321/LKV R-137 to LKV. (Jet route structure only).

LOVELOCK TRANSITION (WATER4·LLC): Fly NFL R-340 and LLC R-219 to LLC.

MUSTANG TRANSITION (WATER4·FMG): Fly FMG R-067 to FMG. Cross the FMG R-067/36 DME at or above 9000.

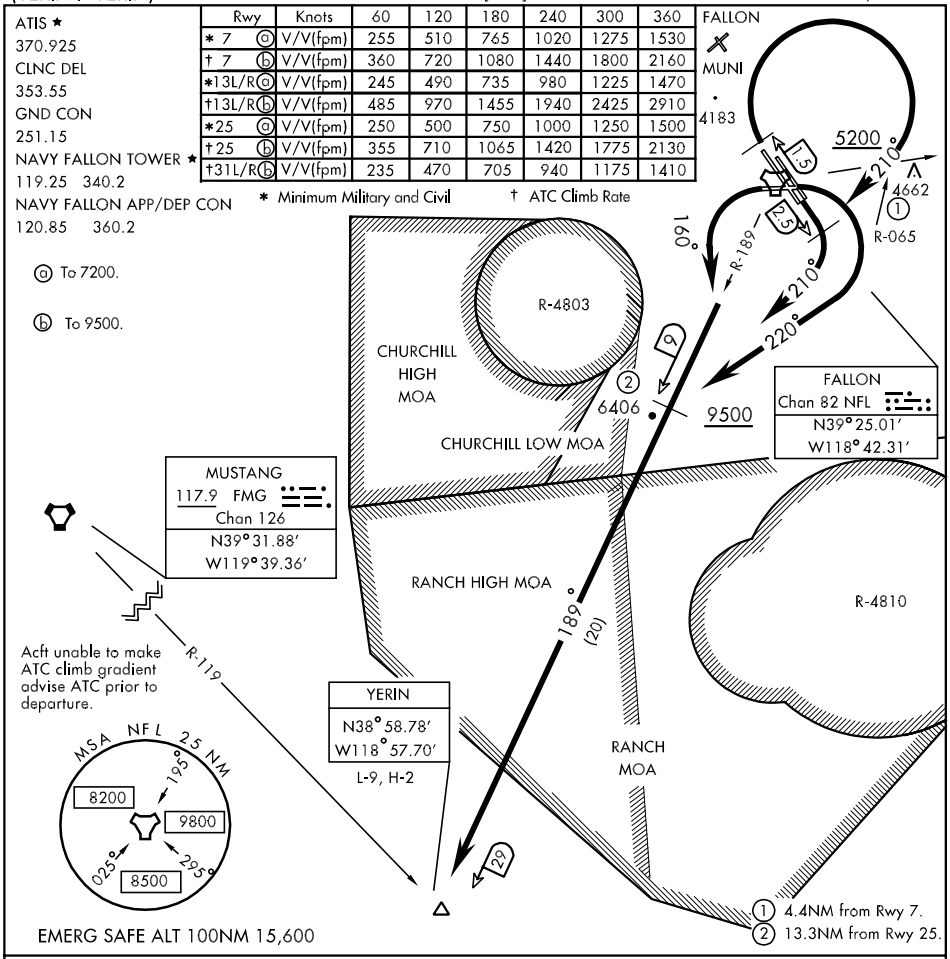
ATIS ★
370.925
CLNC DEL
353.55
GND CON
251.15
NAVY FALLON TOWER ★
119.25 340.2
NAVY FALLON APP/DEP CON
120.85 360.2

Rwy	Knots	60	120	180	240	300	360
* 7 ⓐ	V/V(fpm)	255	510	765	1020	1275	1530
† 7 ⓑ	V/V(fpm)	360	720	1080	1440	1800	2160
*13L/R ⓐ	V/V(fpm)	245	490	735	980	1225	1470
†13L/R ⓑ	V/V(fpm)	485	970	1455	1940	2425	2910
*25 ⓐ	V/V(fpm)	250	500	750	1000	1250	1500
†25 ⓑ	V/V(fpm)	355	710	1065	1420	1775	2130
†31L/R ⓑ	V/V(fpm)	235	470	705	940	1175	1410

* Minimum Military and Civil † ATC Climb Rate

ⓐ To 7200.

ⓑ To 9500.



EMERG SAFE ALT 100NM 15,600

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 7: Turn right heading 220° to join and fly NFL R-189 to YERIN. Cross 9 DME at or above 9500. (Left turn-out not authorized).

TAKE-OFF RWY 13L/R: Climb on runway heading to NFL 2.5 DME, turn right heading 210° to join and fdly NFL R-189 to YERIN. Cross 9 DME at or above 9500.

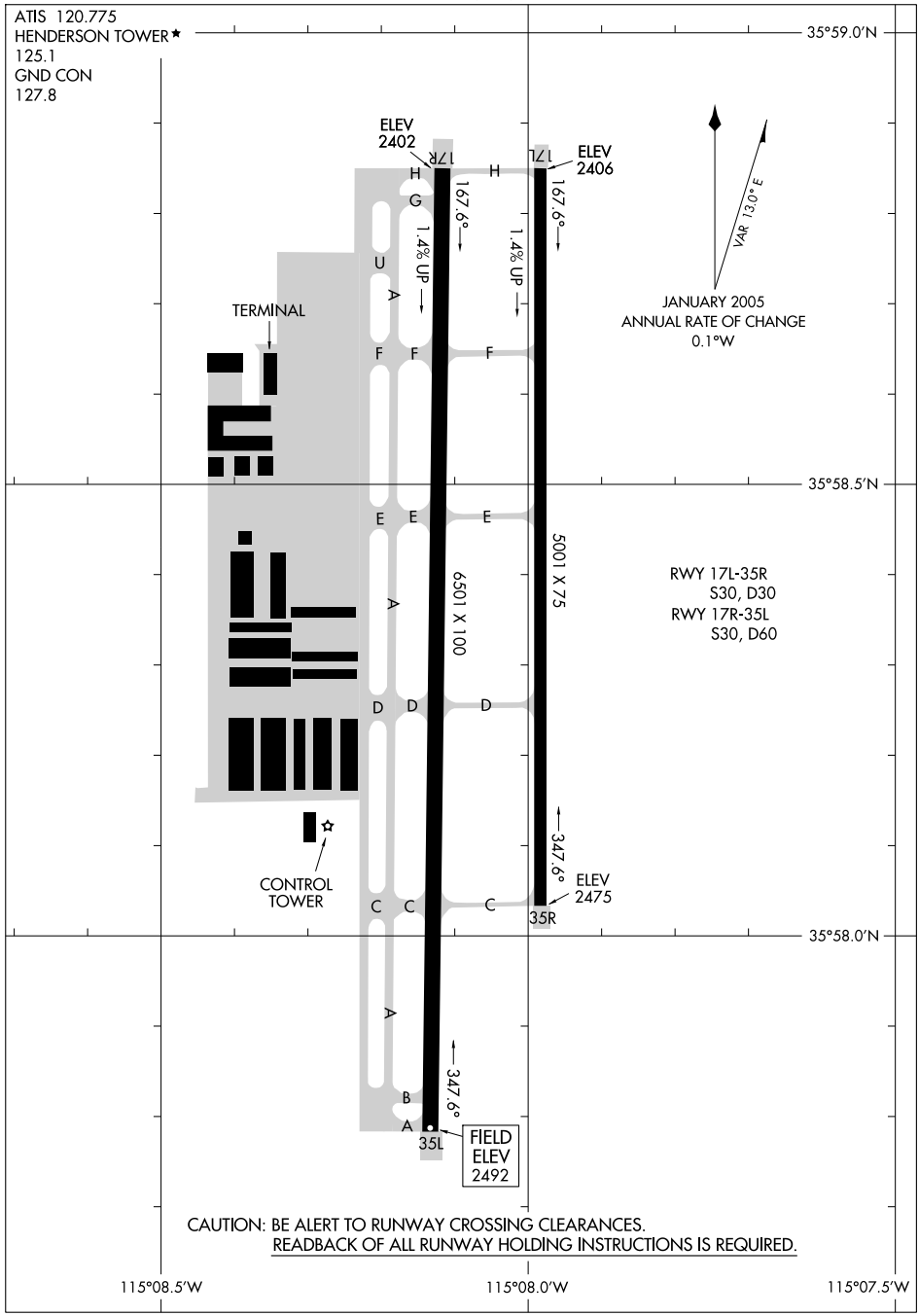
TAKE-OFF RWY 25: Turn left heading 160° to join and fly NFL R-189 to YERIN. Cross 9 DME at or above 9500. (Right turn-out not authorized.

TAKE-OFF RWY 31L/R: Climb on runway heading to NFL 1.5 DME, turn right heading 210° to join and fly NFL R-189 to YERIN. Cross NFL R-065 at or above 5200. Cross 9 DME at or above 9500.

AIRPORT DIAGRAM

AL-6514 (FAA)

LAS VEGAS/HENDERSON EXECUTIVE (HND)
LAS VEGAS, NEVADA

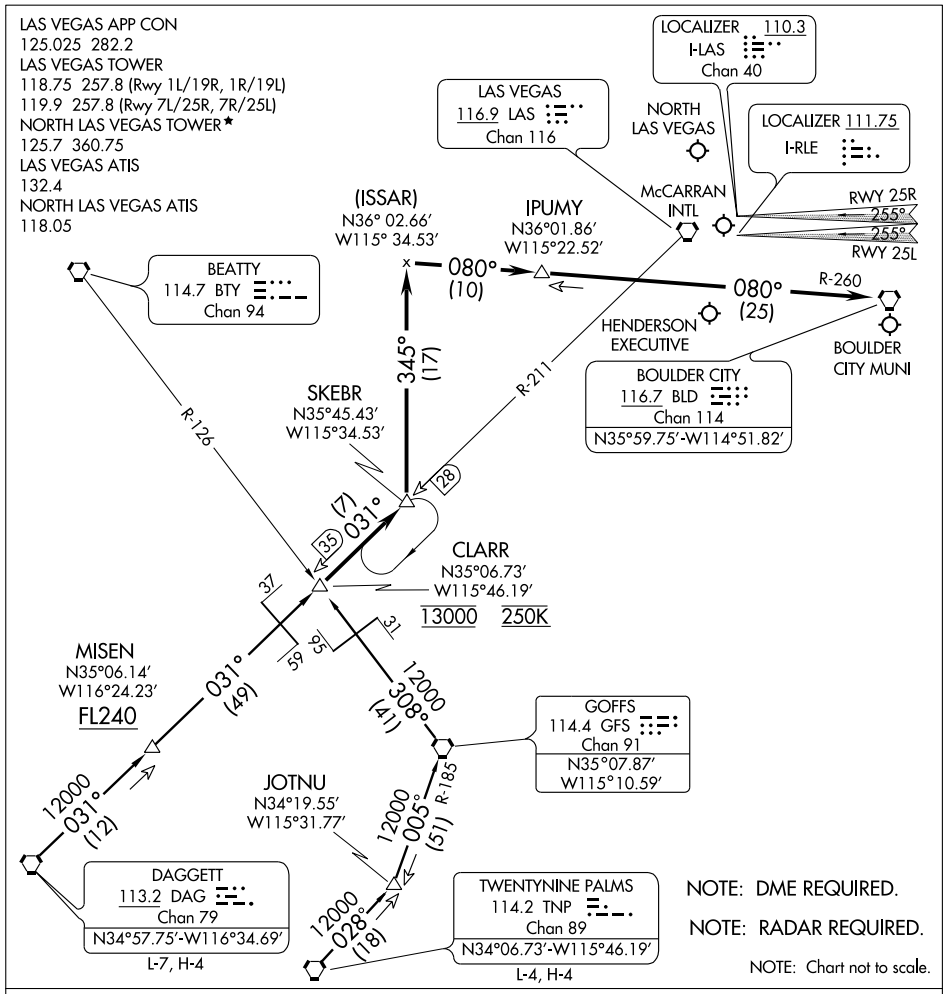


(CLARR.CLARR2) 09351

CLARR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



DAGGETT TRANSITION (DAG.CLARR2): From over DAG VORTAC via DAG R-031 and LAS R-211 to CLARR INT. Thence. . . .

TWENTYNINE PALMS TRANSITION (TNP.CLARR2): From over TNP VORTAC via TNP R-028 to JOTNU INT, then via GFS R-185 to GFS VORTAC, then via GFS R-308 and BTY R-126 to CLARR INT. Thence. . . .

....From over CLARR INT via LAS R-211 to SKEBR INT. Thence. . . .

LANDING MC CARRAN INTL: Via heading 345° to intercept the BLD R-260 to BLD VORTAC. Rwys 1L/R, 7L/R, and 19L/R expect radar vectors for visual approach prior to BLD VORTAC. Rwys 25L/R expect ILS approach procedure.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: After SKEBR INT expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

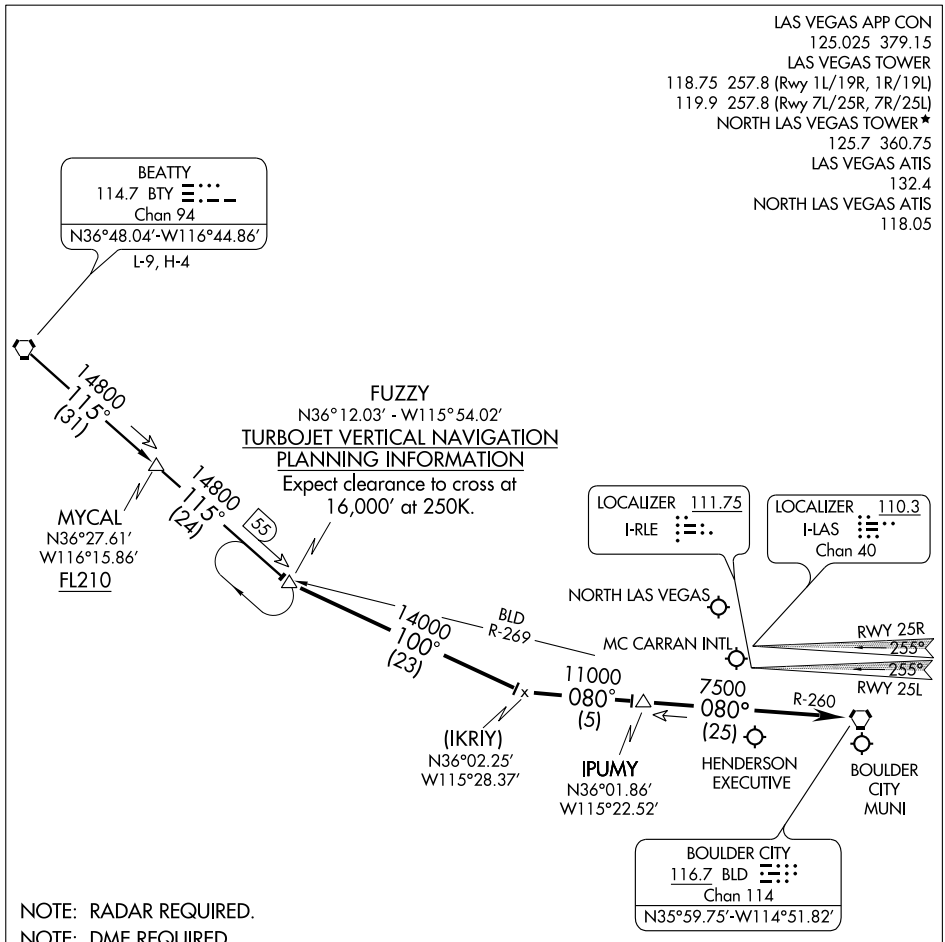
(FUZZY.FUZZY7) 09351

FUZZY SEVEN ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA

LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
NORTH LAS VEGAS TOWER★
125.7 360.75
LAS VEGAS ATIS
132.4
NORTH LAS VEGAS ATIS
118.05



NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: Chart not to scale.

BEATTY TRANSITION (BTY.FUZZY7): From over BTY VORTAC via BTY R-115 to FUZZY INT. Thence . . .

. . . From over FUZZY via heading 100° to intercept BLD R-260 to BLD VORTAC.

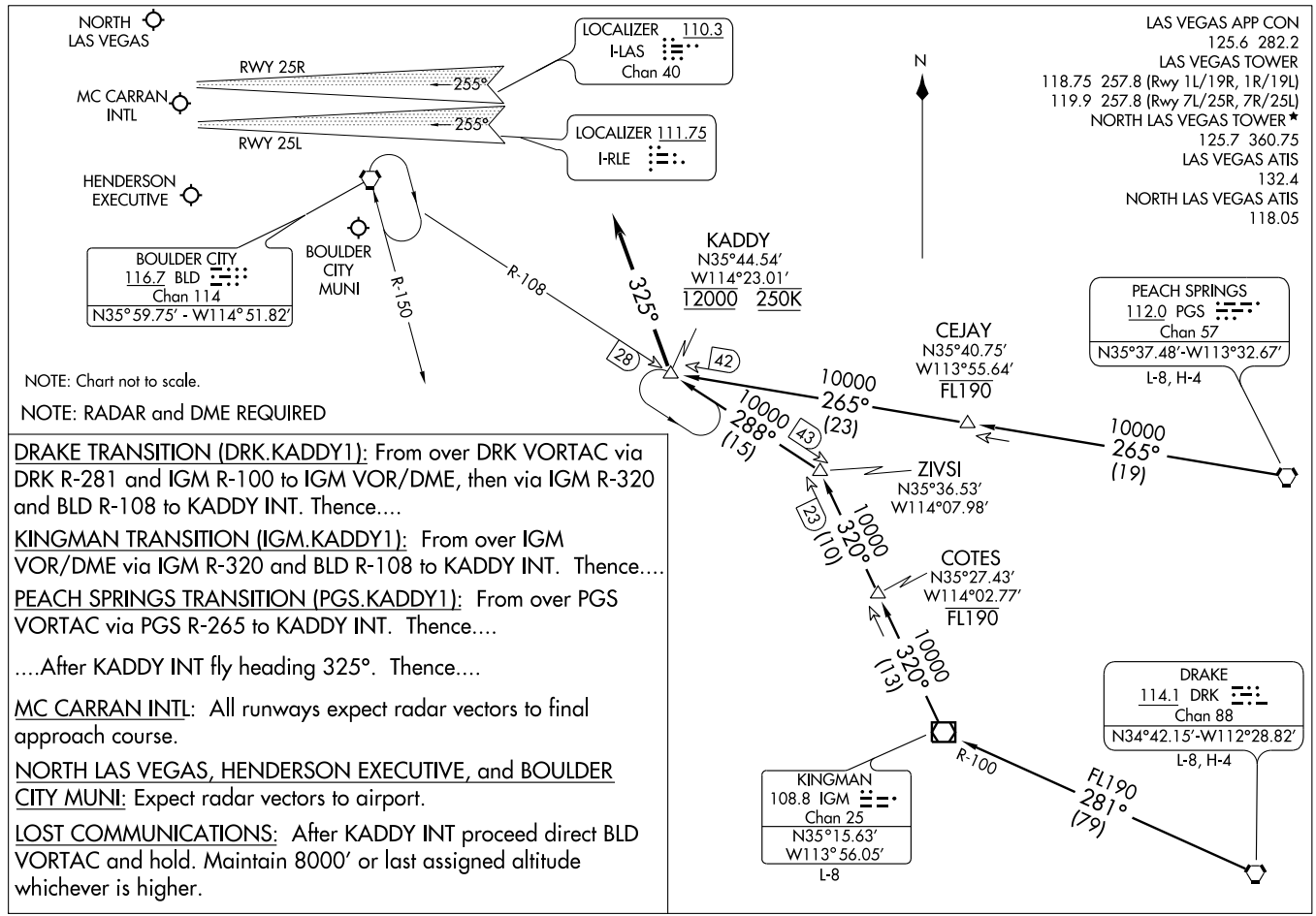
LANDING MC CARRAN INTL RWYS 1L/R, 7L/R, and 19L/R: Expect vectors for visual approach prior to BLD VORTAC.

LANDING MC CARRAN INTL RWYS 25L/R: Expect ILS approach.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI : After IPUMY, expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

KADDY ONE ARRIVAL



NOTE: Chart not to scale.

NOTE: RADAR and DME REQUIRED

DRAKE TRANSITION (DRK.KADDY1): From over DRK VORTAC via DRK R-281 and IGM R-100 to IGM VOR/DME, then via IGM R-320 and BLD R-108 to KADDY INT. Thence....

KINGMAN TRANSITION (IGM.KADDY1): From over IGM VOR/DME via IGM R-320 and BLD R-108 to KADDY INT. Thence....

PEACH SPRINGS TRANSITION (PGS.KADDY1): From over PGS VORTAC via PGS R-265 to KADDY INT. Thence....

....After KADDY INT fly heading 325°. Thence....

MC CARRAN INTL: All runways expect radar vectors to final approach course.

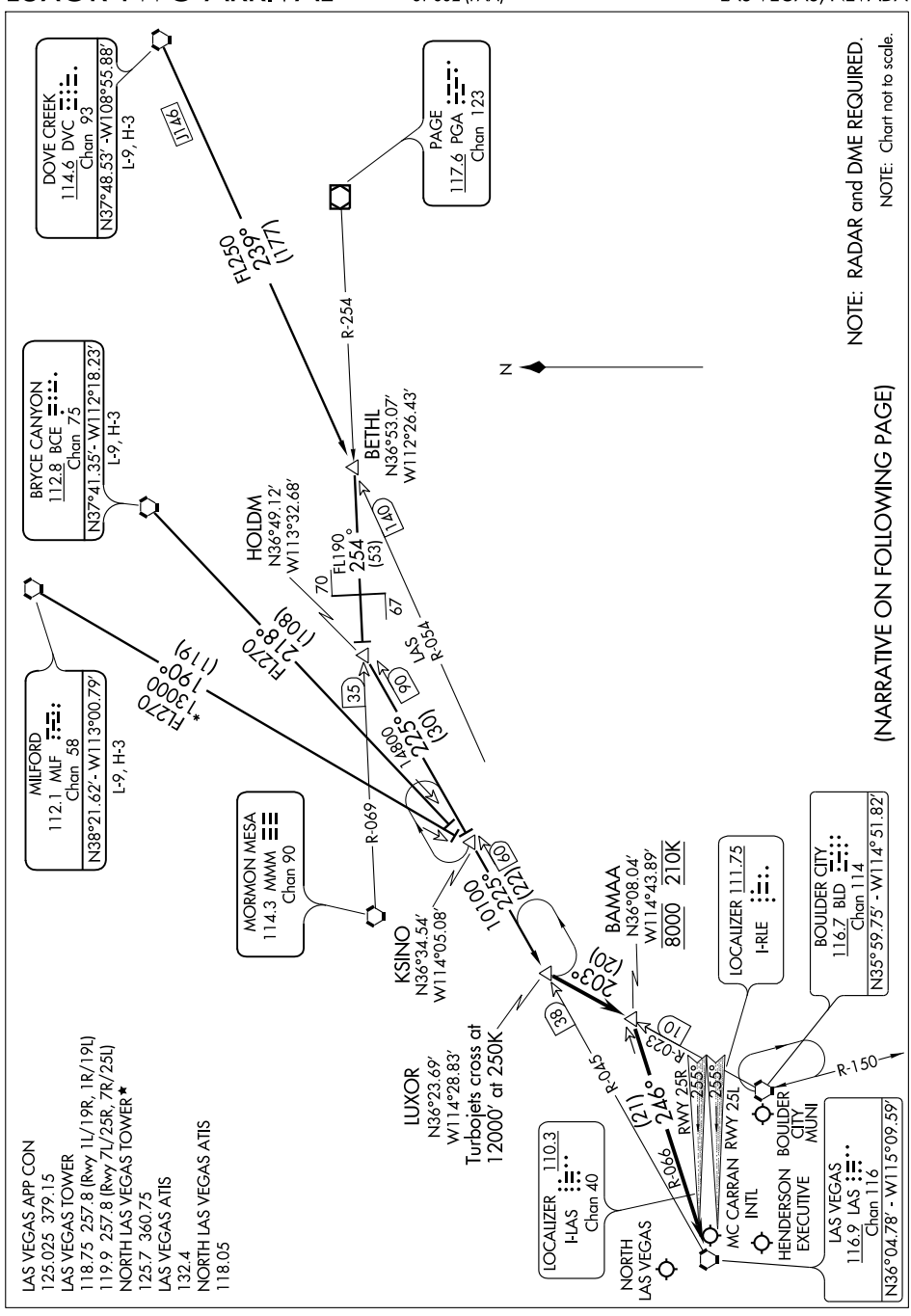
NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After KADDY INT proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

LUXOR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



ARRIVAL DESCRIPTION

BETHL TRANSITION (BETHL.LUXOR2): From over BETHL INT via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

BRYCE CANYON TRANSITION (BCE.LUXOR2): From over BCE VORTAC via BCE R-218 and LAS R-045 to LUXOR INT. Thence. . . .

DOVE CREEK TRANSITION (DVC.LUXOR2): From over DVC VORTAC via DVC R-239 and LAS R-054 to BETHL INT, then via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

MILFORD TRANSITION (MLF.LUXOR2): From over MLF VORTAC via MLF R-190 and LAS R-045 to LUXOR INT. Thence. . . .

. . . .From over LUXOR INT via BLD R-023 to BAMAA INT, thence via LAS R-066 to LAS VORTAC. Thence. . . .

LANDING MC CARRAN INTL: All runways expect radar vectors to final approach course.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After LAS VORTAC proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

LAS VEGAS, NEVADA

AL-6514 (FAA)

APP CRS	Rwy ldg	N/A
347°	TDZE	N/A
	Apt Elev	2497

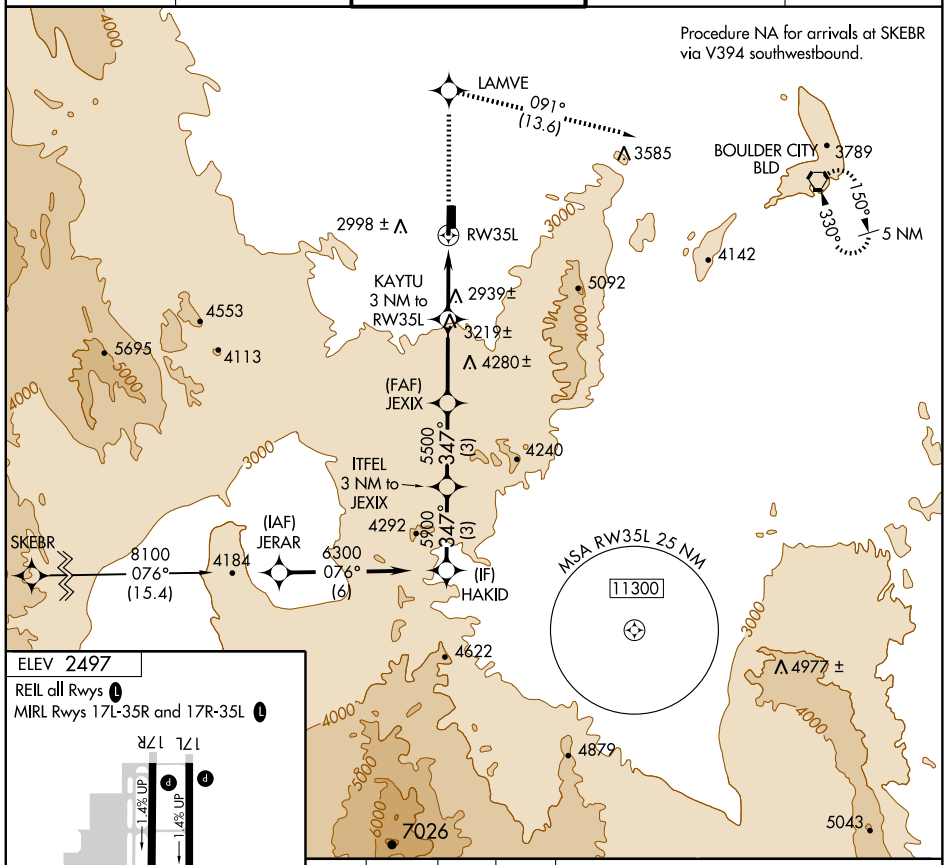
RNAV (GPS)-B

LAS VEGAS/HENDERSON EXECUTIVE (HND)

If local altimeter setting not received, use McCarran Intl altimeter setting.
DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 6000 direct LAMVE and via 091° track to BLD VORTAC and hold.

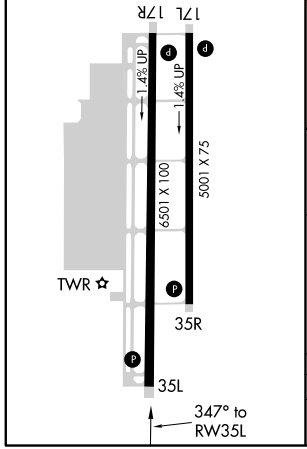
ATIS	LAS VEGAS APP CON	HENDERSON TOWER★	GND CON	UNICOM
120.775	118.4 307.25	125.1 (CTAF) L	127.8	122.95

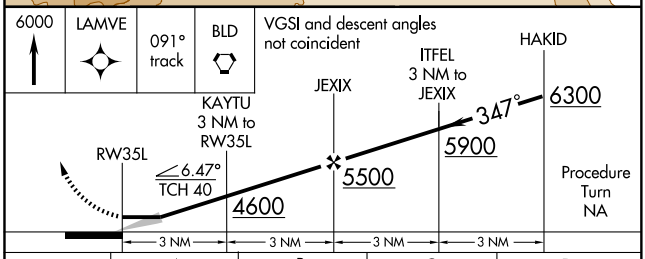


ELEV 2497

REIL all Rwys L

MIRL Rwys 17L-35R and 17R-35L L





CATEGORY	A	B	C	D
CIRCLING	3400-1¼ 903 (1000-1¼)		NA	NA

SW-4, 14 JAN 2010 to 11 FEB 2010

VORTAC BLD	APP CRS	Rwy ldg	N/A
116.7	247°	TDZE	N/A
Chan 114		Apt Elev	2497

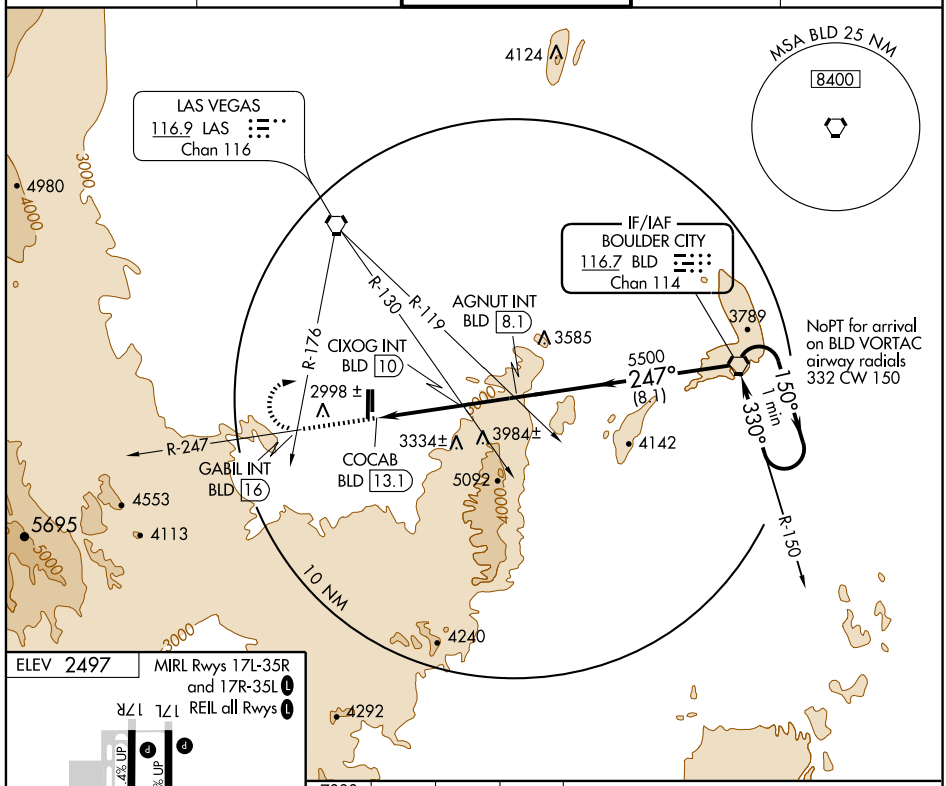
VOR-C

LAS VEGAS/HENDERSON EXECUTIVE (HND)

If local altimeter setting not received use McCarran Intl altimeter setting and increase all MDAs 60 feet. Circling to Rwy 35L and 35R NA at night.

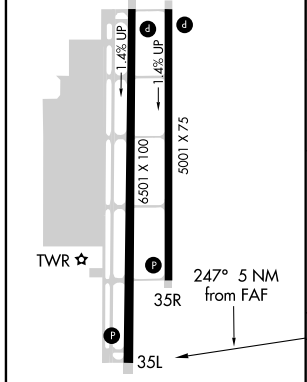
MISSED APPROACH: Climb to 7000 via BLD R-247 to GABIL Int/ BLD 16 DME, and a right turn direct BLD VORTAC and hold.

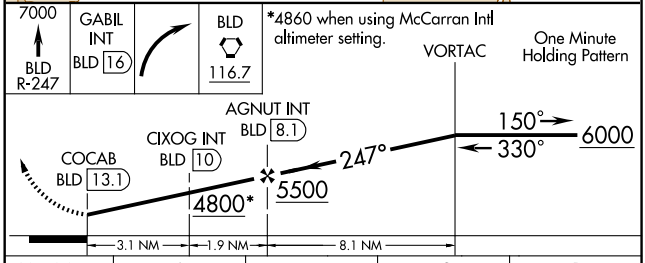
ATIS	LAS VEGAS APP CON	HENDERSON TOWER ★	GND CON	UNICOM
120.775	118.4 307.25	125.1 (CTAF) L	127.8	122.95



ELEV 2497

MIRL Rwys 17L-35R and 17R-35L L
REIL all Rwys L





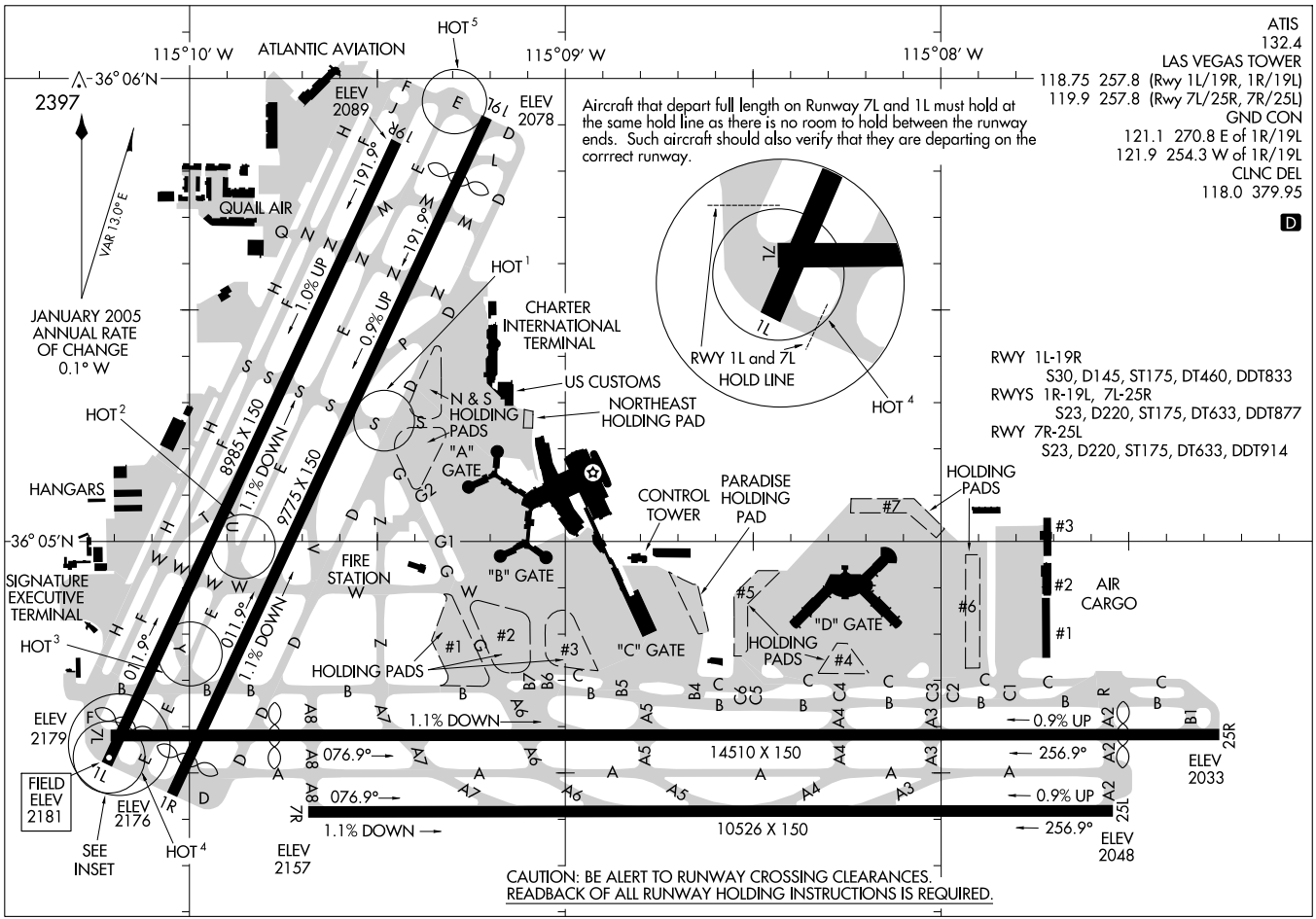
CATEGORY	A	B	C	D
CIRCLING	4800-1¼ 2303 (2400-1¼)	4800-1½ 2303 (2400-1½)	4800-3 2303 (2400-3)	NA

CIXOG FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)

CIRCLING	3620-1¼ 1123 (1200-1¼)	3620-1½ 1123 (1200-1½)	3620-3 1123 (1200-3)	NA

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

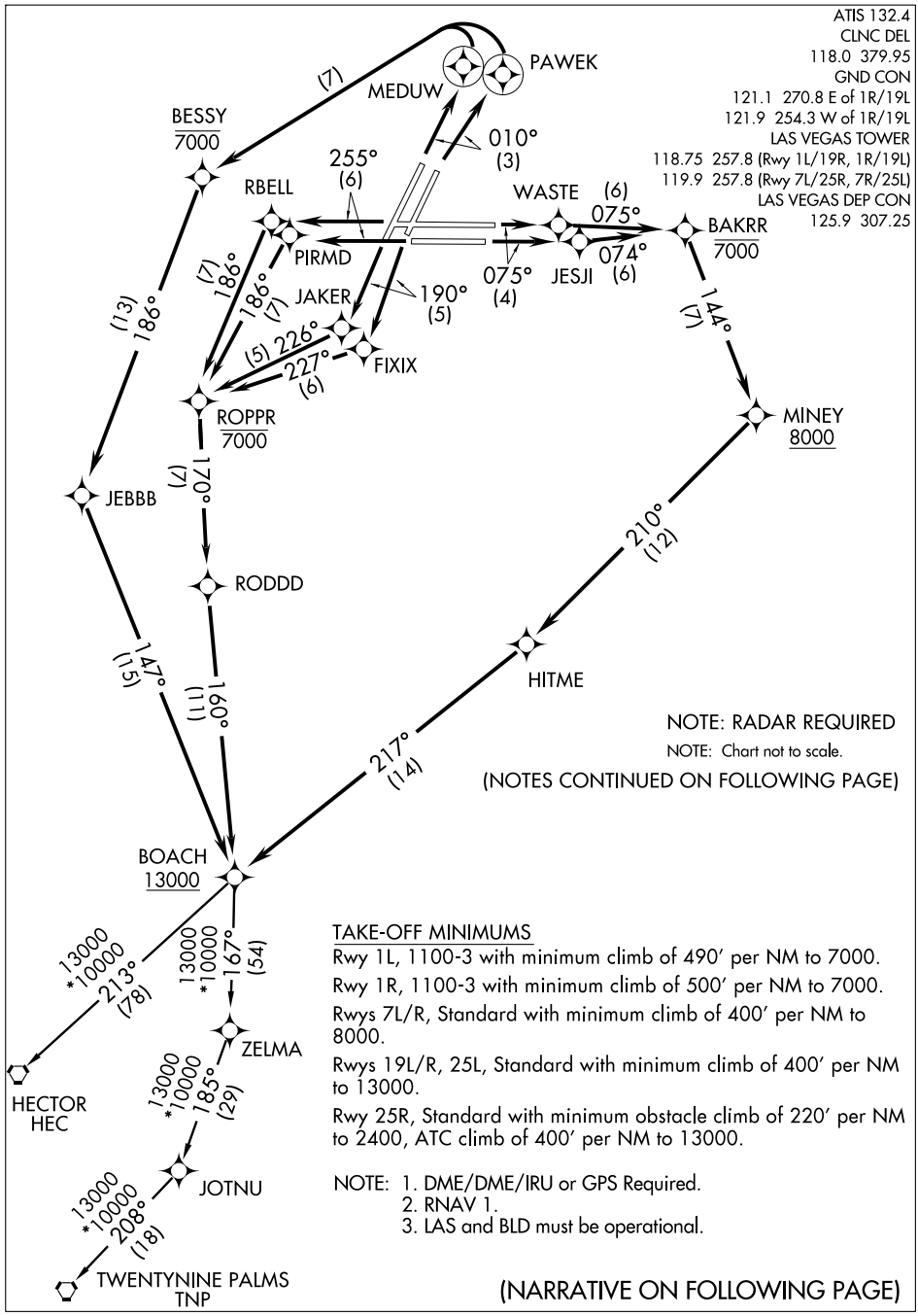

AIRPORT DIAGRAM
LAS VEGAS/McCARRAN INTL (LAS)
LAS VEGAS, NEVADA
AL-662 (FAA)
ATIS
132.4
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
CLNC DEL
118.0 379.95
D
115°10′ W
115°09′ W
115°08′ W
36° 06′N
36° 05′N
2397
VAR 13.0° E
JANUARY 2005
ANNUAL RATE
OF CHANGE
0.1° W
ATLANTIC AVIATION
QUAIL AIR
HOT 5
HOT 1
HOT 2
HOT 3
HOT 4
ELEV 2089
ELEV 2078
ELEV 2179
ELEV 2176
ELEV 2157
ELEV 2033
ELEV 2048
FIELD ELEV 2181
SEE INSET
Aircraft that depart full length on Runway 7L and 1L must hold at the same hold line as there is no room to hold between the runway ends. Such aircraft should also verify that they are departing on the corrrect runway.
RWY 1L and 7L
HOLD LINE
CHARTER INTERNATIONAL TERMINAL
US CUSTOMS
NORTHEAST HOLDING PAD
N & S HOLDING PADS
"A" GATE
"B" GATE
"C" GATE
"D" GATE
CONTROL TOWER
PARADISE HOLDING PAD
HOLDING PADS
HANGARS
SIGNATURE EXECUTIVE TERMINAL
FIRE STATION
AIR CARGO
8985 X 150
9775 X 150
14510 X 150
10526 X 150
1.0% UP
0.9% UP
1.1% DOWN
191.9°
011.9°
076.9°
256.9°
RWY 1L-19R
S30, D145, ST175, DT460, DDT833
RWYS 1R-19L, 7L-25R
S23, D220, ST175, DT633, DDT877
RWY 7R-25L
S23, D220, ST175, DT633, DDT914
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

BOACH TWO DEPARTURE (RNAV)

SL-662 (FAA)

LAS VEGAS/MC CARRAN INTL (LAS)
LAS VEGAS, NEVADA

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25



TAKE-OFF MINIMUMS

Rwy 1L, 1100-3 with minimum climb of 490′ per NM to 7000.

Rwy 1R, 1100-3 with minimum climb of 500′ per NM to 7000.

Rwys 7L/R, Standard with minimum climb of 400′ per NM to 8000.

Rwys 19L/R, 25L, Standard with minimum climb of 400′ per NM to 13000.

Rwy 25R, Standard with minimum obstacle climb of 220′ per NM to 2400, ATC climb of 400′ per NM to 13000.

NOTE:
1. DME/DME/IRU or GPS Required.
2. RNAV 1.
3. LAS and BLD must be operational.

(NARRATIVE ON FOLLOWING PAGE)

SW-4, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 1L: Climb via 010° course to MEDUW WP, then left turn direct to cross BESSY WP at or below 7000, then via 186° track to JEBBB WP, then via 147° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 1R: Climb via 010° course to PAWEK WP, then left turn direct to cross BESSY WP at or below 7000, then via 186° track to JEBBB WP, then via 147° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 7L: Climb via 075° course to WASTE WP, then via 075° track to cross BAKRR WP at or below 7000, then via 144° track to cross MINEY WP at or above 8000, then via 210° track to HITME WP, then via 217° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 7R: Climb via 075° course to JESJI WP, then via 074° track to cross BAKRR WP at or below 7000, then via 144° track to cross MINEY WP at or above 8000, then via 210° track to HITME WP, then via 217° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 19L: Climb via 190° course to FIXIX WP, then via 227° track to cross ROPPR WP at or below 7000, then via 170° track to RODDD WP, then via 160° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 19R: Climb via 190° course to JAKER WP, then via 226° track to cross ROPPR WP at or below 7000, then via 170° track to RODDD WP, then via 160° track to cross BOACH WP at or above 13000. Thence....

TAKE-OFF RUNWAY 25L: Climb via 255° course to PIRMD WP, then via 186° track to cross ROPPR WP at or below 7000, then via 170° track to cross RODDD WP then via 160° track to cross BOACH WP at or above 13000, Thence....

TAKE-OFF RUNWAY 25R: Climb via 255° course to RBELL WP, then via 186° track to cross ROPPR WP at or below 7000, then via 170° track to RODDD WP, then via 160° track to cross BOACH WP at or above 13000, Thence....

....via (Transition) maintain FL190, expect filed altitude 10 minutes after departure.

HECTOR TRANSITION (BOACH2.HEC)

TWENTYNINE PALMS TRANSITION (BOACH2.TNP)

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple poles, tree, and building 450 feet from departure end of rwy, 283 feet left of centerline, up to 174′ AGL/2132′ MSL.
OL on windsock 248 feet from departure end of rwy, 224 feet right of centerline, 15′ AGL/2104′ MSL.

RWY 1R: Multiple signs and building 1331 feet from departure end of rwy, 448 feet right of centerline, up to 100′ AGL/2120′ MSL.

RWY 7L: Multiple poles and trees 747 feet from departure end of rwy, 442 feet right of centerline, up to 62′ AGL/2062′ MSL.
Tree 1257 feet from departure end of rwy, 789 feet left of centerline, 65′ AGL/2077′ MSL.

RWY 7R: Lighted windsock 126 feet from departure end of rwy, 290 feet right of centerline, 25′ AGL/2051′ MSL.

RWY 19L: Multiple poles, sign, and building 1394 feet from departure end of rwy, 320 feet right of centerline, up to 51′ AGL/2256′ MSL.

RWY 19R: Multiple poles, sign, and building 197 feet from departure end of rwy, 125 feet right of centerline, up to 51′ AGL/2256′ MSL.
Multiple poles and building 1396 feet from departure end of rwy, 356 feet left of centerline, up to 47′ AGL/2262′ MSL.

RWY 25L: Multiple poles, sign, and building 1003 feet from departure end of rwy, 251 feet left of centerline, up to 63′ AGL/2256′ MSL.

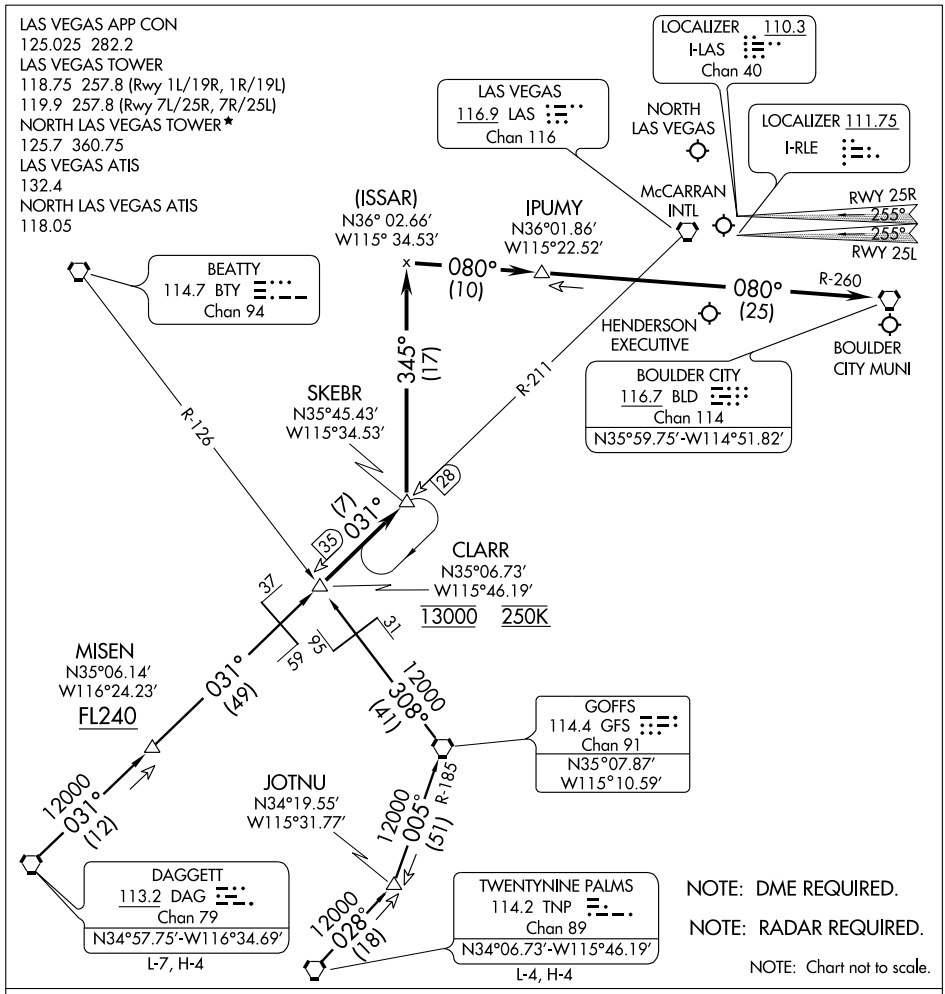
RWY 25R: Multiple poles and road 675 feet from departure end of rwy, 17 feet right of centerline, up to 100′ AGL/2301′ MSL.
Multiple poles and buildings 533 feet from departure end of rwy, 1 foot left of centerline, up to 150′ AGL/2469′ MSL.

(CLARR.CLARR2) 09351

CLARR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



DAGGETT TRANSITION (DAG.CLARR2): From over DAG VORTAC via DAG R-031 and LAS R-211 to CLARR INT. Thence. . . .

TWENTYNINE PALMS TRANSITION (TNP.CLARR2): From over TNP VORTAC via TNP R-028 to JOTNU INT, then via GFS R-185 to GFS VORTAC, then via GFS R-308 and BTY R-126 to CLARR INT. Thence. . . .

....From over CLARR INT via LAS R-211 to SKEBR INT. Thence. . . .

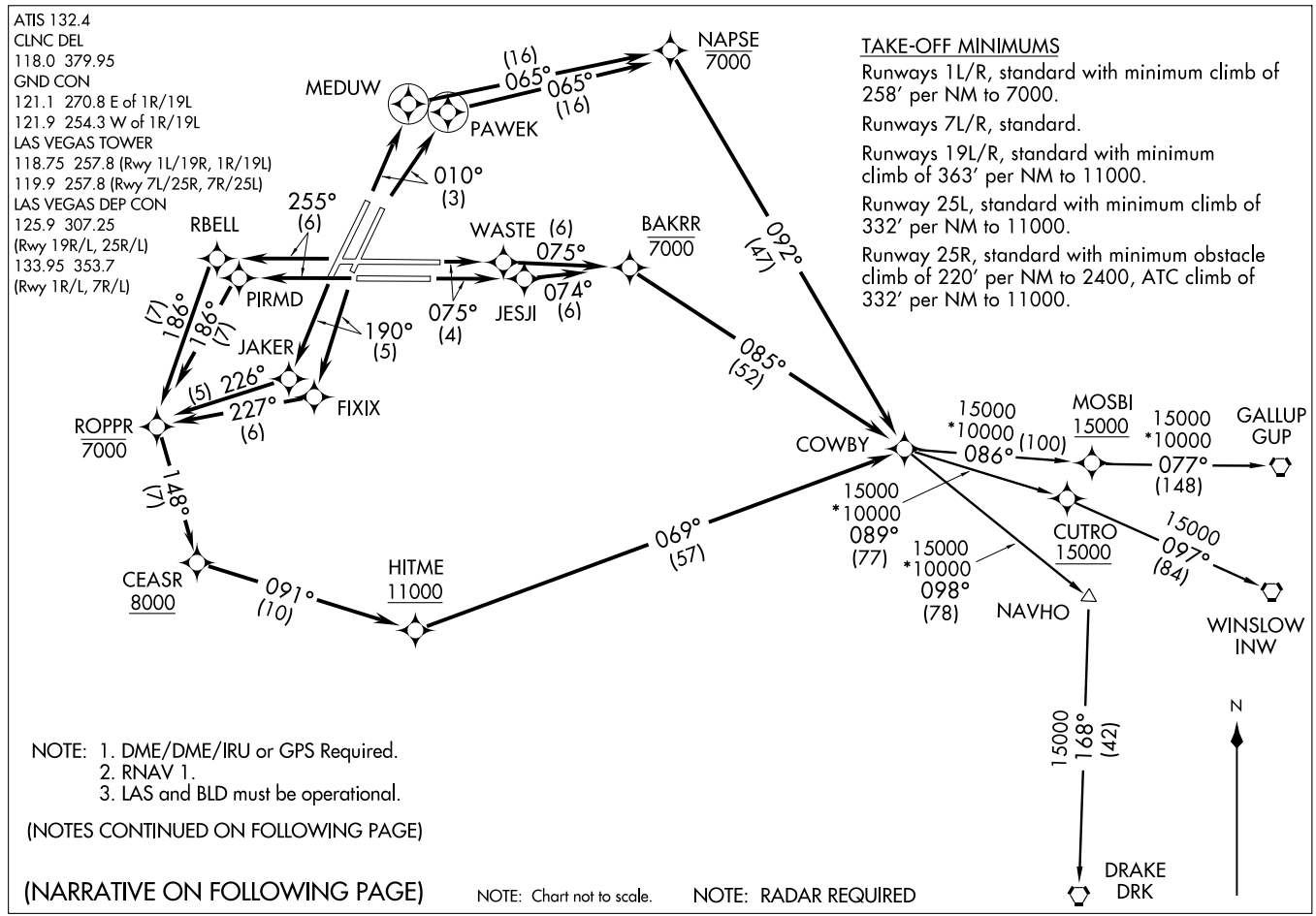
LANDING MC CARRAN INTL: Via heading 345° to intercept the BLD R-260 to BLD VORTAC. Rwys 1L/R, 7L/R, and 19L/R expect radar vectors for visual approach prior to BLD VORTAC. Rwys 25L/R expect ILS approach procedure.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: After SKEBR INT expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

COWBY TWO DEPARTURE (RNAV)

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25
(Rwy 19R/L, 25R/L)
133.95 353.7
(Rwy 1R/L, 7R/L)



TAKE-OFF MINIMUMS

Runways 1L/R, standard with minimum climb of 258′ per NM to 7000.

Runways 7L/R, standard.

Runways 19L/R, standard with minimum climb of 363′ per NM to 11000.

Runway 25L, standard with minimum climb of 332′ per NM to 11000.

Runway 25R, standard with minimum obstacle climb of 220′ per NM to 2400, ATC climb of 332′ per NM to 11000.

NOTE: 1. DME/DME/IRU or GPS Required.
2. RNAV 1.
3. LAS and BLD must be operational.

(NOTES CONTINUED ON FOLLOWING PAGE)

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

NOTE: RADAR REQUIRED

COWBY TWO DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 1L: Climb via 010° course to MEDUW WP, then via 065° track to cross NAPSE WP at or below 7000, then via 092° track to COWBY WP. Thence. . . .

TAKE-OFF RUNWAY 1R: Climb via 010° course to PAWEK WP, then via 065° track to cross NAPSE WP at or below 7000, then via 092° track to COWBY WP. Thence. . . .

TAKE-OFF RUNWAY 7L: Climb via 075° course to WASTE WP, then via 075° track to cross BAKRR WP at or below 7000, then via 085° track to COWBY WP. Thence. . . .

TAKE-OFF RUNWAY 7R: Climb via 075° course to JESJI WP, then via 074° track to cross BAKRR WP at or below 7000, then via 085° track to COWBY WP. Thence. . . .

TAKE-OFF RUNWAY 19L: Climb via 190° course to FIXIX WP, then via 227° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 069° track to COWBY WP. Thence....

TAKE-OFF RUNWAY 19R: Climb via 190° course to JAKER WP, then via 226° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 069° track to COWBY WP. Thence....

TAKE-OFF RUNWAY 25L: Climb via 255° course to PIRMD WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 069° track to COWBY WP. Thence....

TAKE-OFF RUNWAY 25R: Climb via 255° course to RBELL WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 069° track to COWBY WP. Thence...

....via (Transition) maintain FL190, expect filed altitude 10 minutes after departure.

DRAKE TRANSITION (COWBY2.DRK)

GALLUP TRANSITION (COWBY2.GUP)

WINSLOW TRANSITION (COWBY2.INW)

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple poles, tree, and building 450 feet from departure end of rwy, 283 feet left of centerline, up to 174′ AGL/2132′ MSL.
OL on windsock 248 feet from departure end of rwy, 224 feet right of centerline, 15′ AGL/2104′ MSL.

RWY 1R: Multiple signs and building 1331 feet from departure end of rwy, 448 feet right of centerline, up to 100′ AGL/2120′ MSL.

RWY 7L: Multiple poles and trees 747 feet from departure end of rwy, 442 feet right of centerline, up to 62′ AGL/2062′ MSL.
Tree 1257 feet from departure end of rwy, 789 feet left of centerline, 65′ AGL/2077′ MSL.

RWY 7R: Lighted windsock 126 feet from departure end of rwy, 290 feet right of centerline, 25′ AGL/2051′ MSL.

RWY 19L: Multiple poles, sign, and building 1394 feet from departure end of rwy, 320 feet right of centerline, up to 51′ AGL/2256′ MSL.

RWY 19R: Multiple poles, sign, and building 197 feet from departure end of rwy, 125 feet right of centerline, up to 51′ AGL/2256′ MSL.
Multiple poles and building 1396 feet from departure end of rwy, 356 feet left of centerline, up to 47′ AGL/2262′ MSL.

RWY 25L: Multiple poles, sign, and building 1003 feet from departure end of rwy, 251 feet left of centerline, up to 63′ AGL/2256′ MSL.

RWY 25R: Multiple poles and road 675 feet from departure end of rwy, 17 feet right of centerline, up to 100′ AGL/2301′ MSL.
Multiple poles and buildings 533 feet from departure end of rwy, 1 foot left of centerline, up to 150′ AGL/2469′ MSL.

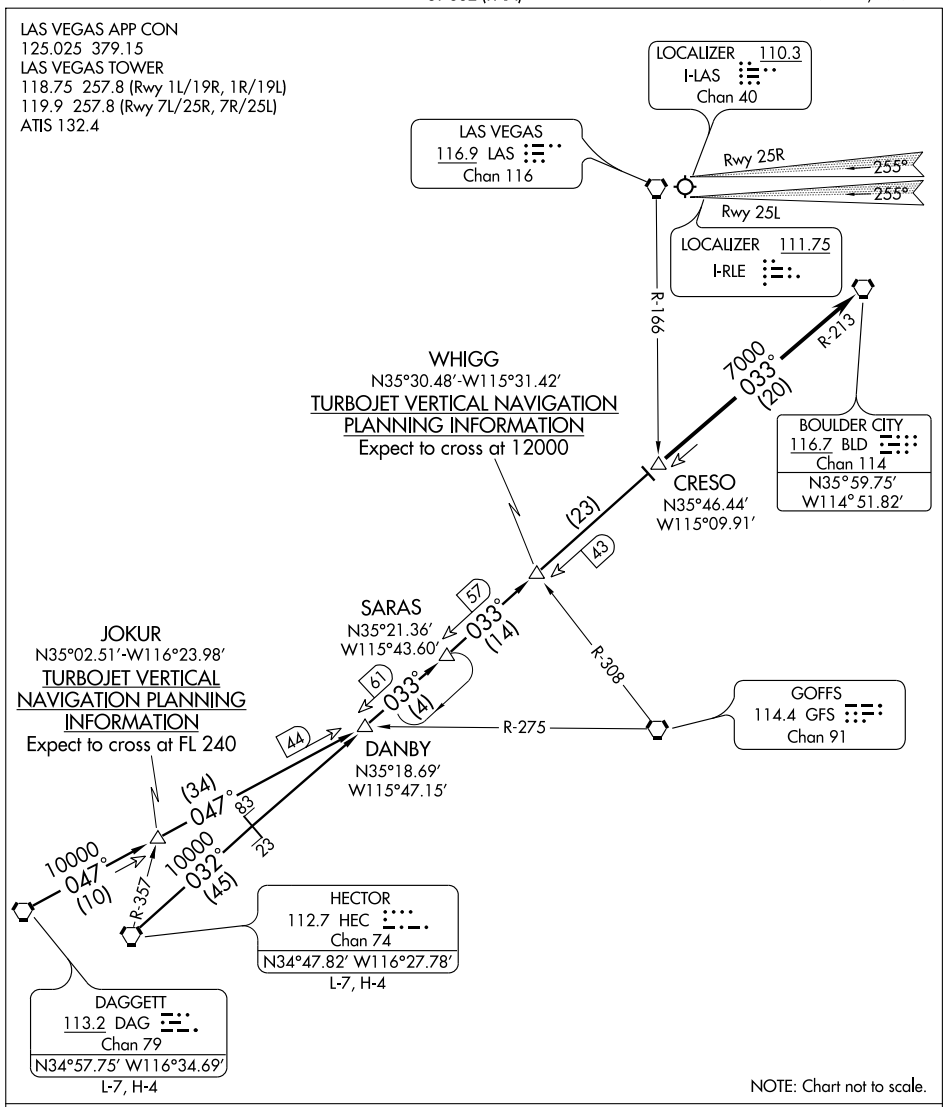
SW-4, 14 JAN 2010 to 11 FEB 2010

CRESO THREE ARRIVAL

ST-662 (FAA)

MC CARRAN INTL
LAS VEGAS, NEVADA

LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
ATIS 132.4



DAGGETT TRANSITION (DAG.CRESO3): From over DAG VORTAC via DAG R-047 and BLD R-213 to CRESO INT/DME, thence....

HECTOR TRANSITION (HEC.CRESO3): From over HEC VORTAC via HEC R-032 and BLD R-213 to CRESO INT/DME, Thence....

....From over CRESO INT/DME via BLD R-213 to BLD VORTAC. Runways 1, 7 and 19 expect vectors to final approach course. From BLD VORTAC, expect ILS approach Runway 25L.

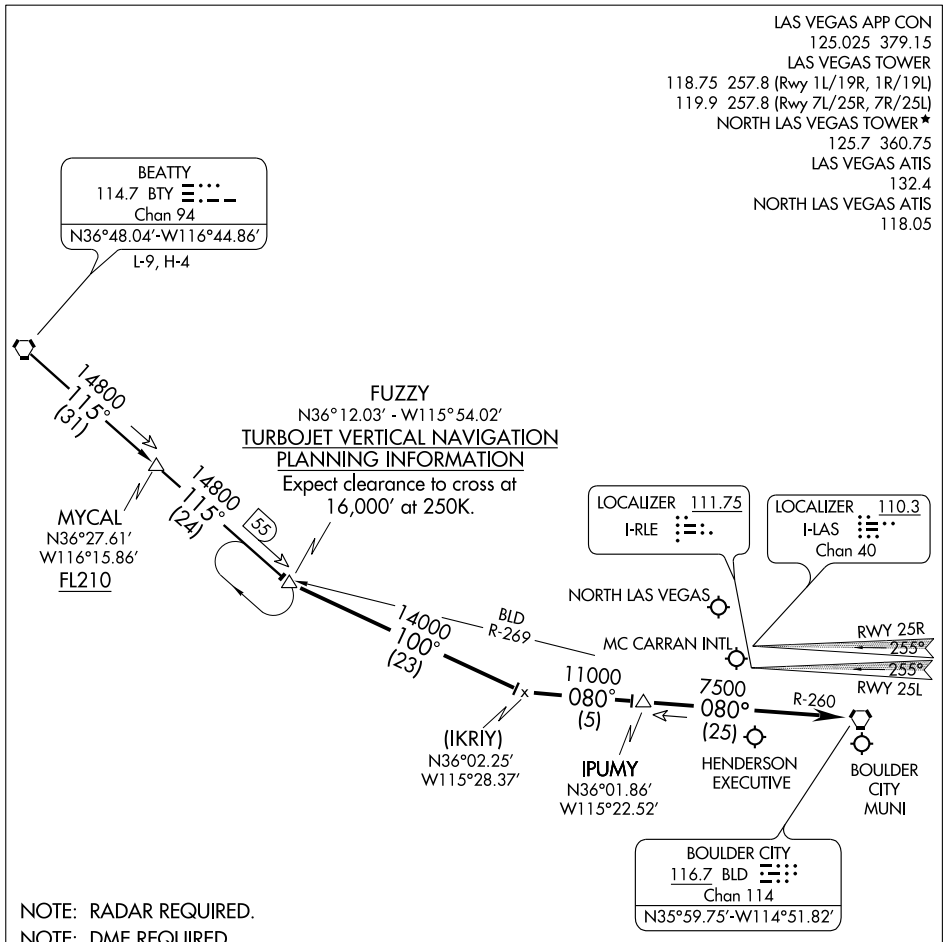
(FUZZY.FUZZY7) 09351

FUZZY SEVEN ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA

LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
NORTH LAS VEGAS TOWER★
125.7 360.75
LAS VEGAS ATIS
132.4
NORTH LAS VEGAS ATIS
118.05



NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: Chart not to scale.

BEATTY TRANSITION (BTY.FUZZY7): From over BTY VORTAC via BTY R-115 to FUZZY INT. Thence . . .

. . . From over FUZZY via heading 100° to intercept BLD R-260 to BLD VORTAC.

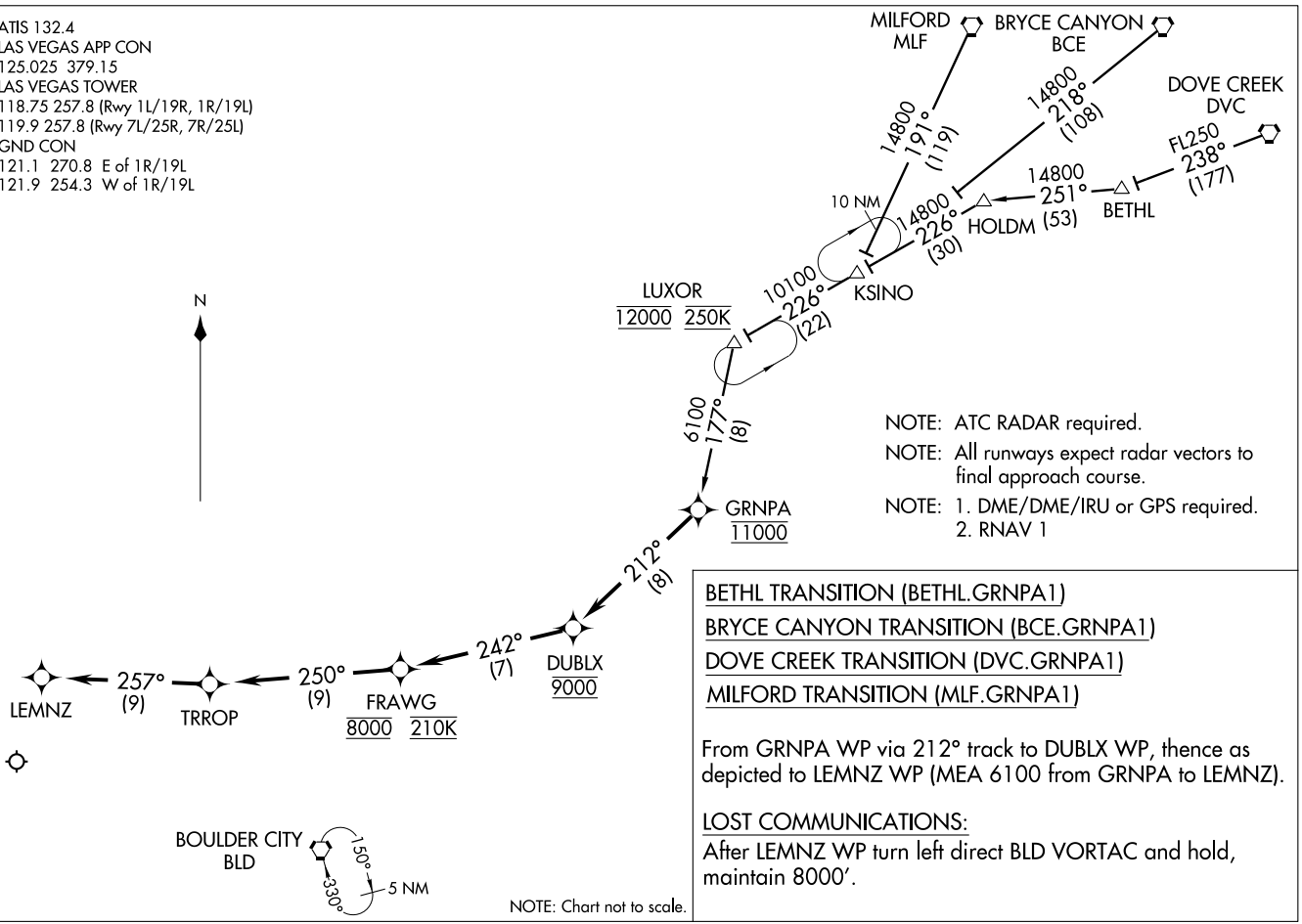
LANDING MC CARRAN INTL RWYS 1L/R, 7L/R, and 19L/R: Expect vectors for visual approach prior to BLD VORTAC.

LANDING MC CARRAN INTL RWYS 25L/R: Expect ILS approach.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI : After IPUMY, expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

ATIS 132.4
LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L



NOTE: Chart not to scale.

NOTE: ATC RADAR required.

NOTE: All runways expect radar vectors to final approach course.

NOTE: 1. DME/DME/IRU or GPS required.
2. RNAV 1

BETHL TRANSITION (BETHL.GRNPA1)

BRYCE CANYON TRANSITION (BCE.GRNPA1)

DOVE CREEK TRANSITION (DVC.GRNPA1)

MILFORD TRANSITION (MLF.GRNPA1)

From GRNPA WP via 212° track to DUBLX WP, thence as depicted to LEMNZ WP (MEA 6100 from GRNPA to LEMNZ).

LOST COMMUNICATIONS:

After LEMNZ WP turn left direct BLD VORTAC and hold, maintain 8000′.

(GRNPA.GRNPA1) 09351

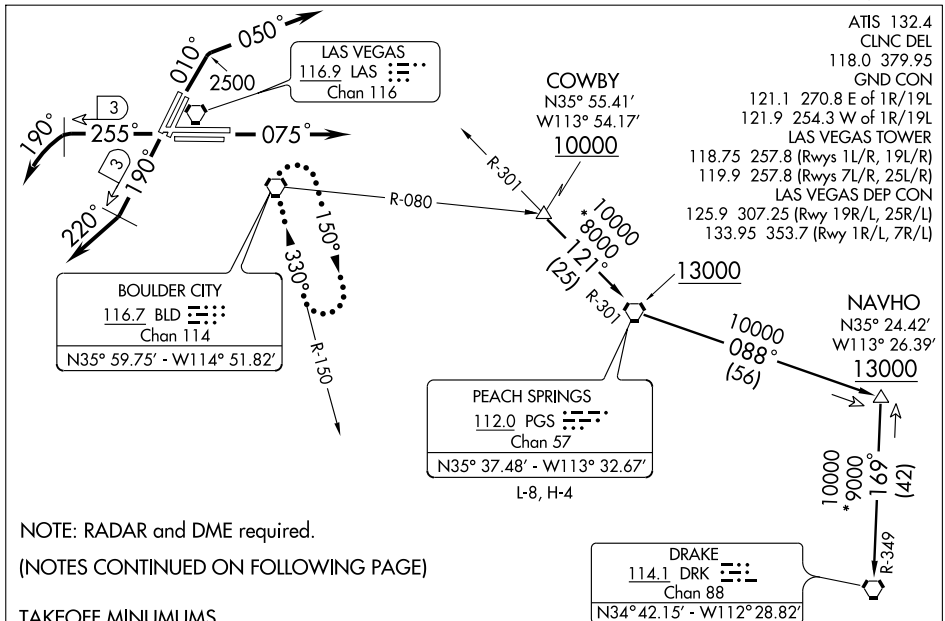
GRNPA ONE ARRIVAL (RNAV)

ST-662 (FAA)

MC CARRAN INTL
LAS VEGAS, NEVADA

HOOVER THREE DEPARTURE

LAS VEGAS/MC CARRAN INTL (LAS)
LAS VEGAS, NEVADA



NOTE: RADAR and DME required.

(NOTES CONTINUED ON FOLLOWING PAGE)

TAKEOFF MINUMUMS

Rwys 7L/R: Standard.

Rwys 1L/R: Standard with minimum obstacle climb of 328′ per NM to 5000′, ATC climb of 400 feet per NM to 5200′.

Rwys 25L/R: Standard with minimum obstacle climb of 324 feet per NM to 7100, ATC climb of 360 feet per NM to 7000′.

Rwys 19L/R: Standard with minimum climb of 360 feet per NM to 7000′.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 1L/R: Climb via heading 010° to 2500, then climbing right turn via heading 050°, thence ....

TAKE-OFF RUNWAYS 7L/R: Climb via heading 075°, thence ....

TAKE-OFF RUNWAYS 19L/R: Climb via heading 190° until LAS VORTAC 3 DME, then right turn via heading 220°, thence ....

TAKE-OFF RUNWAYS 25L/R: Climb via heading 255° until LAS VORTAC 3 DME, then left turn via heading 190°, thence ....

.... via radar vector to transition or assigned route, maintain 7000, expect clearance to filed altitude two minutes after departure.

LOST COMMUNICATIONS: If no contact with ATC upon reaching 7000′, proceed direct BLD VORTAC then climb in BLD VORTAC holding pattern to appropriate MEA for route of flight.

DRAKE TRANSITION (HOOVR3.DRK): From over COWBY INT via PGS R-301 to PGS VORTAC then PGS R-088 and DRK R-349 to DRK VORTAC.

PEACH SPRINGS TRANSITION (HOOVR3.PGS): From over COWBY INT via PGS R-301 to PGS VORTAC.

HOOVER THREE DEPARTURE

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple buildings 3954′ from DER, 1 NM left of centerline, up to 283′ AGL/2409′ MSL.
Pole 450′ from DER, 283′ left of centerline, 38′ AGL/2118′ MSL.
Obstacle light on wind sock 248′ from DER, 224′ right of centerline, 50′ AGL/2104′ MSL.
Pole 1029′ from DER, 715′ left of centerline, 85′ AGL/2124′ MSL.
Tree 1536′ from DER, 502′ left of centerline, 100′ AGL/2132′ MSL.

RWY 1R: Sign 1331′ from DER, 448′ right of centerline, 60′ AGL/2120′ MSL
Building 599′ from DER, 541′ right of centerline, 70′ AGL/2096′ MSL
Multiple buildings 4878′ from DER, 1.2 NM left of centerline, up to 283′ AGL/2409′ MSL.

RWY 25R: Light pole 3115′ from DER, 1033′ right of centerline, 109′ AGL/2301′ MSL.
Light on pole 1.5 NM from DER, 2836′ left of centerline, 124′ AGL/2457′ MSL.
Road 1.7 NM from DER, 2965′ left of centerline, 139′ AGL/2469′ MSL.
Light on pole 1100′ from DER, 508′ left of centerline, 47′ AGL/2226′ MSL.
Building 1822′ from DER, 652′ left of centerline, 46′ AGL/2238′ MSL.
Building 2202′ from DER, 596′ left of centerline, 44′ AGL/2246′ MSL.
Rod on building 534′ from DER, 369′ left of centerline, 33′ AGL/2202′ MSL.
Road 678′ from DER, 16′ right of centerline, 35′ AGL/2201′ MSL.
Light on localizer antenna 533′ from DER, 32′ AGL/2195′ MSL.

RWY 25L: Pole 2860′ from DER, 813′ left of centerline, 57′ AGL/2236′ MSL.
Sign 3672′ from DER, 1302′ left of centerline, 57′ AGL/2256′ MSL.
Antenna on building 1002′ from DER, 251′ left of centerline, 34′ AGL/2183′ MSL.
Pole 3677′ from DER, 145′ left of centerline, 67′ AGL/2249′ MSL.

RWY 7L: Tree 1257′ from DER, 789′ left of centerline, 85′ AGL/2077′ MSL.
Light pole 747′ from DER, 441′ right of centerline, 62′ AGL/2057′ MSL.
Tree 1007′ from DER, 557′ right of centerline, 70′ AGL/2062′ MSL.

RWY 7R: Light on wind sock 102′ from DER, 300′ right of centerline, 30′ AGL/2051′ MSL.

RWY 19L: Pole 1394′ from DER, 533′ right of centerline, 36′ AGL/2236′ MSL.
Sign 2181′ from DER, 1062′ right of centerline, 50′ AGL/2256′ MSL.
Rod on building 2921′ from DER, 581′ right of centerline, 50′ AGL/2262′ MSL.
Pole 2633′ from DER, 319′ right of centerline, 40′ AGL/2246′ MSL.

RWY 19R: Pole 1135′ from DER, 619′ right of centerline, 65′ AGL/2249′ MSL.
Pole 756′ from DER, 618′ right of centerline, 50′ AGL/2231′ MSL.
Sign 2182′ from DER, 125′ right of centerline, 50′ AGL/2256′ MSL.
Pole 1396′ from DER, 403′ left of centerline, 55′ AGL/2236′ MSL.
Rod on building 197′ from DER, 441′ right of centerline, 30′ AGL/2202′ MSL.
Rod on building 2922′ from DER, 356′ left of centerline, 50′ AGL/2262′ MSL.

SW-4, 14 JAN 2010 to 11 FEB 2010

ILS or LOC/DME RWY 1L

LAS VEGAS/MC CARRAN INTL (LAS)

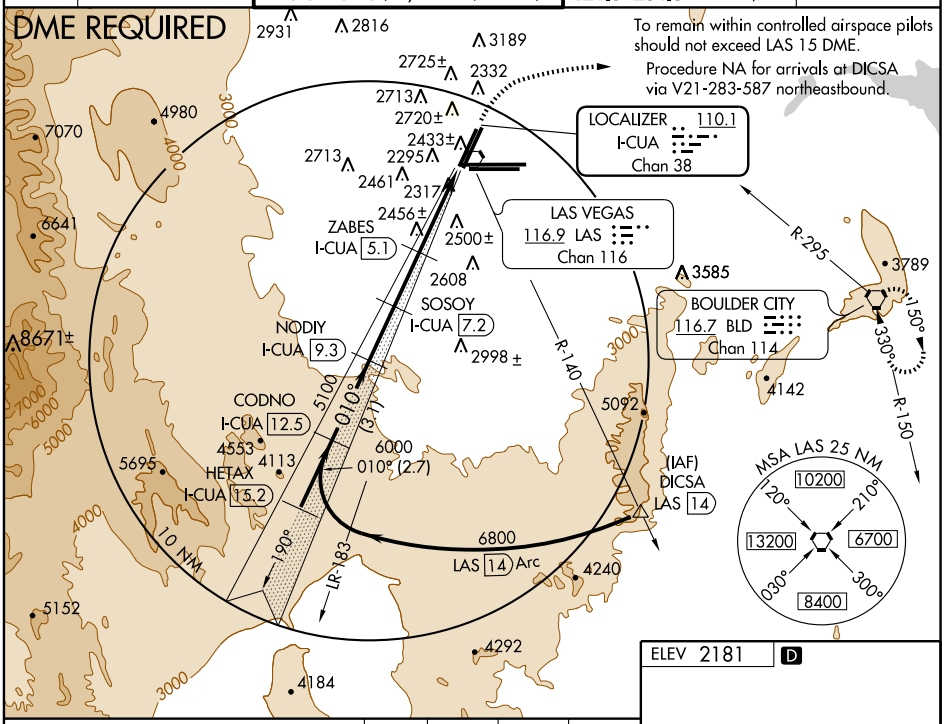
LOC/DME I-CUA	APP CRS	Rwy ldg 1L	8401
110.1	010°	TDZE	2176
Chan 38		Apt Elev	2181

Inoperative table does not apply to S-LOC 1L Cat C.

MALSF

MISSED APPROACH: Climb to 3200, then climbing right turn to 6000 via 070° heading and BLD R-295 to BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95



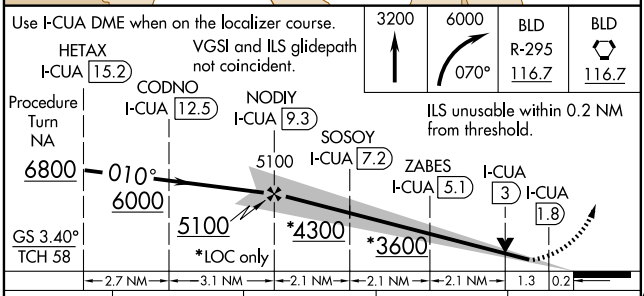
SW-4, 14 JAN 2010 to 11 FEB 2010

Use I-CUA DME when on the localizer course.

VGSI and ILS glidepath not coincident.

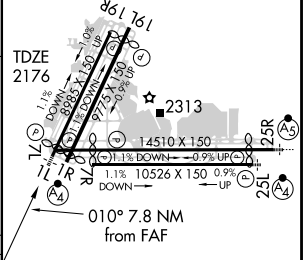
3200	6000	BLD	BLD
	070°	R-295	
		116.7	116.7

ILS unusable within 0.2 NM from threshold.



CATEGORY	A	B	C	D
S-ILS 1L	2460-1 284 (300-1)			NA
S-LOC 1L	2720-1 544 (600-1)		2720-1½ 544 (600-1½)	NA
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3020-2½ 839 (900-2½)	NA

ELEV 2181 D



REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

LOC I-RLE	APP CRS	Rwy ldg 25L		Rwy ldg 25R	
111.75	255°	TDZE	10526	TDZE	12755
		Apt Elev	2069	Apt Elev	2067
			2181		2181

ILS or LOC RWY 25L

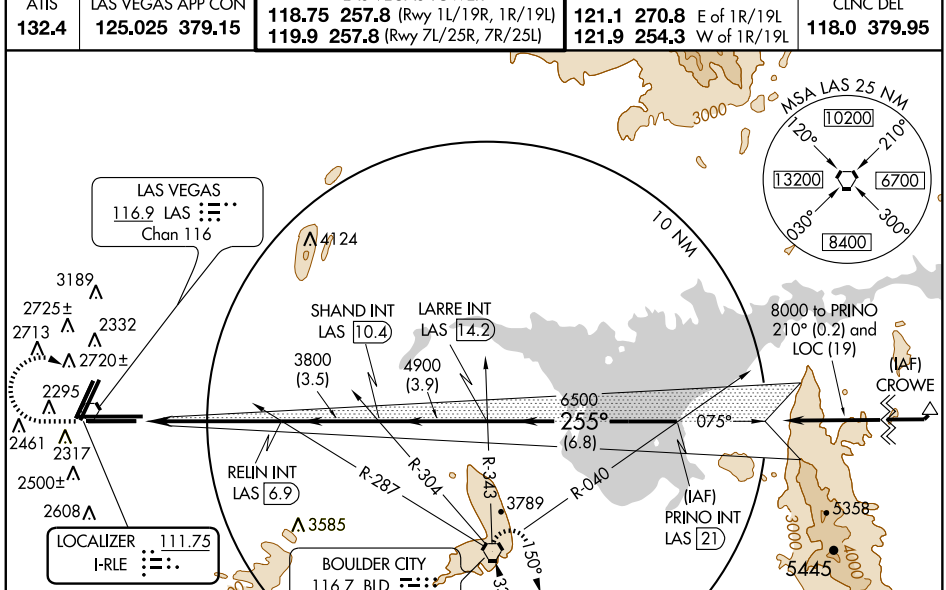
LAS VEGAS/MC CARRAN INTL (LAS)

Inoperative table does not apply to S-LOC 25L
Cat C and Sidestep 25R Cats A and B.

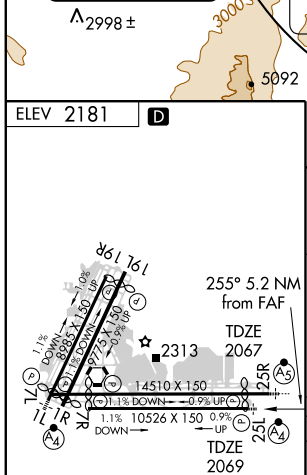
MALSF Rwy 25L (A4) MALSR Rwy 25R (A5)

MISSED APPROACH: Climb to 3000 then climbing right turn to 6000 direct BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95

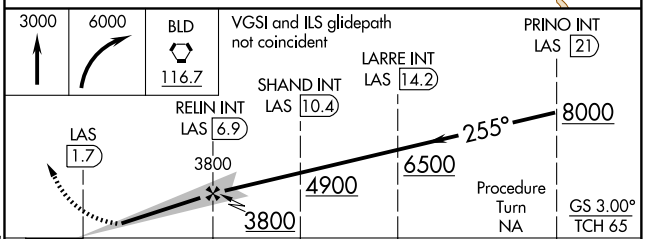


ELEV 2181 D



REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44



CATEGORY	A	B	C	D	E
S-ILS 25L	2269-¾ 200 (100-¾)				
S-LOC 25L	2540-¾ 471 (400-¾)		2540-1¼ 471 (400-1¼)	2540-1½ 471 (400-1½)	2540-1¾ 471 (400-1¾)
SIDESTEP RWY 25R	2540-1 473 (400-1)			2540-1½ 473 (400-1½)	
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3020-2½ 839 (900-2½)	3020-2¾ 839 (900-2¾)	3540-3 1359 (1400-3)

SW-4, 14 JAN 2010 to 11 FEB 2010

ILS or LOC RWY 25R

LAS VEGAS/MC CARRAN INTL (LAS)

LOC/DME I-LAS	APP CRS	Rwy ldg 25R	Rwy ldg 25L
110.3 Chan 40	255°	TDZE 2067, Apt Elev 2181	TDZE 2069, Apt Elev 2181

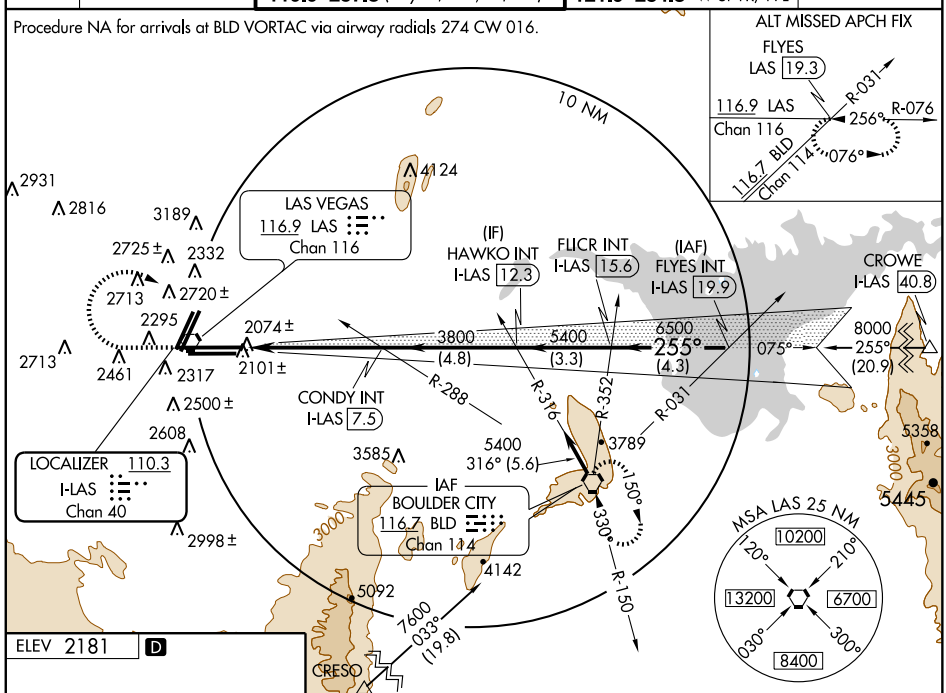
Inoperative table does not apply to Sidestep 25L.
For inoperative MALSR, increase S-ILS Cat E visibility ¼ mile, and S-LOC Cat E visibility ½ mile.

MALSR Rwy 25R (A5) | MALSF Rwy 25L (A4)

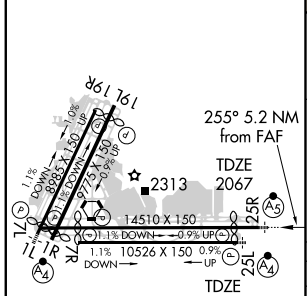
MISSED APPROACH: Climb to 3200, then climbing right turn to 6000 direct BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95

Procedure NA for arrivals at BLD VORTAC via airway radials 274 CW 016.

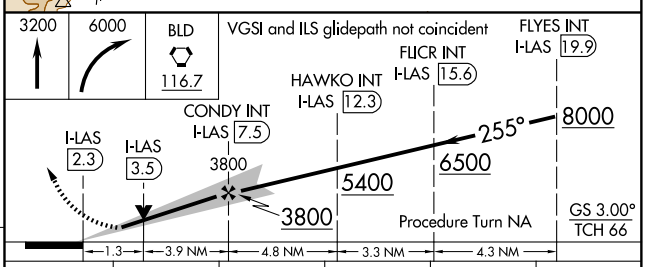


ELEV 2181 D



REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

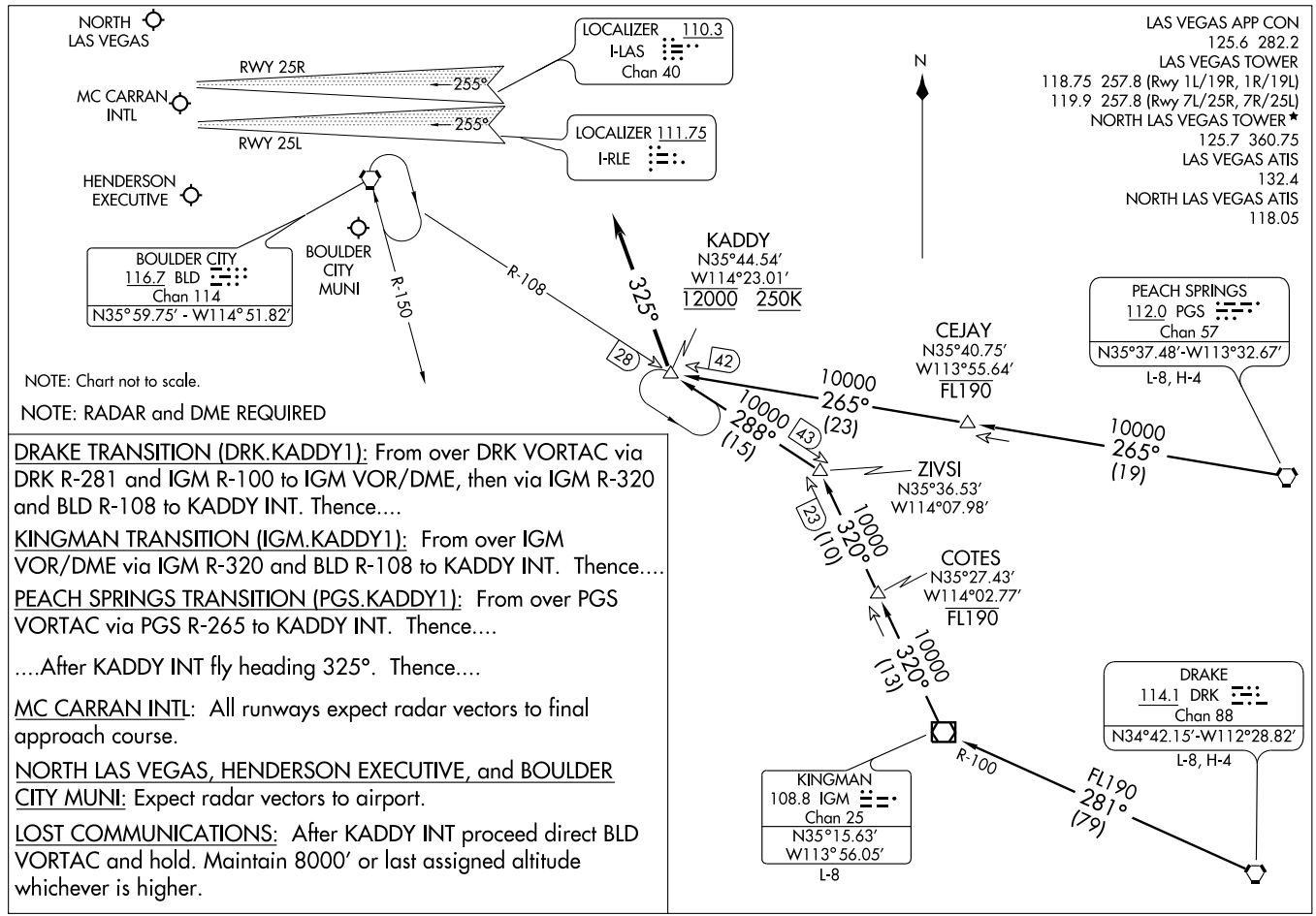
FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42



CATEGORY	A	B	C	D	E
S-ILS 25R	2340-½ 273 (200-½)				
S-LOC 25R	2540-½ 473 (400-½)		2540-¾ 473 (400-¾)	2540-1 473 (400-1)	2540-1¼ 473 (400-1¼)
SIDESTEP RWY 25L	2540-1 471 (400-1)		2540-1½ 471 (400-1½)	2540-2 471 (400-2)	
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3020-2½ 839 (900-2½)	3040-2¾ 859 (900-2¾)	3540-3 1359 (1400-3)

SW-4, 14 JAN 2010 to 11 FEB 2010

KADDY ONE ARRIVAL



NOTE: Chart not to scale.

NOTE: RADAR and DME REQUIRED

DRAKE TRANSITION (DRK.KADDY1): From over DRK VORTAC via DRK R-281 and IGM R-100 to IGM VOR/DME, then via IGM R-320 and BLD R-108 to KADDY INT. Thence....

KINGMAN TRANSITION (IGM.KADDY1): From over IGM VOR/DME via IGM R-320 and BLD R-108 to KADDY INT. Thence....

PEACH SPRINGS TRANSITION (PGS.KADDY1): From over PGS VORTAC via PGS R-265 to KADDY INT. Thence....

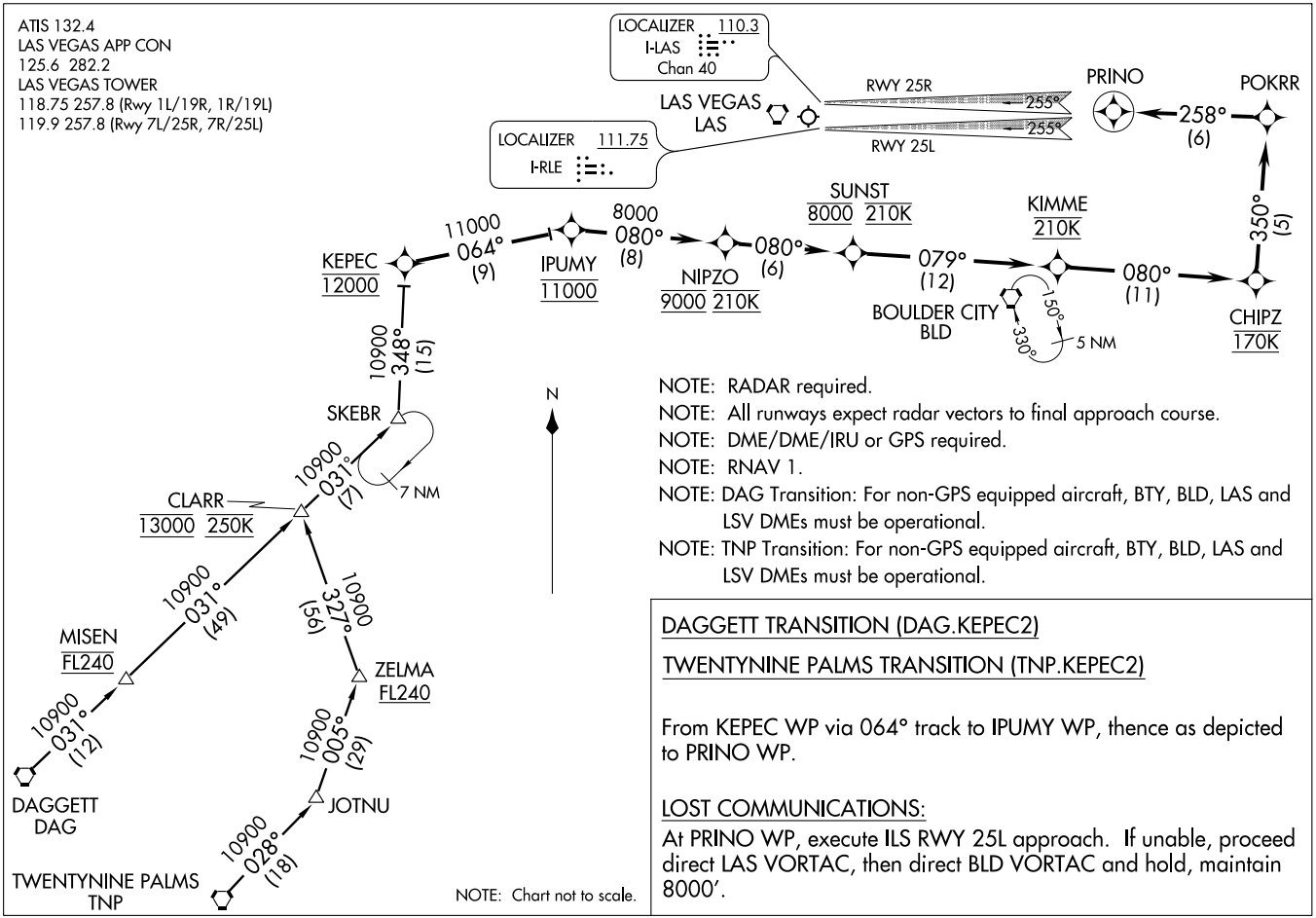
....After KADDY INT fly heading 325°. Thence....

MC CARRAN INTL: All runways expect radar vectors to final approach course.

NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After KADDY INT proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

KEPEC TWO ARRIVAL (RNAV)



NOTE: RADAR required.

NOTE: All runways expect radar vectors to final approach course.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: DAG Transition: For non-GPS equipped aircraft, BTY, BLD, LAS and LSV DMEs must be operational.

NOTE: TNP Transition: For non-GPS equipped aircraft, BTY, BLD, LAS and LSV DMEs must be operational.

DAGGETT TRANSITION (DAG.KEPEC2)

TWENTYNINE PALMS TRANSITION (TNP.KEPEC2)

From KEPEC WP via 064° track to IPUMY WP, thence as depicted to PRINO WP.

LOST COMMUNICATIONS:

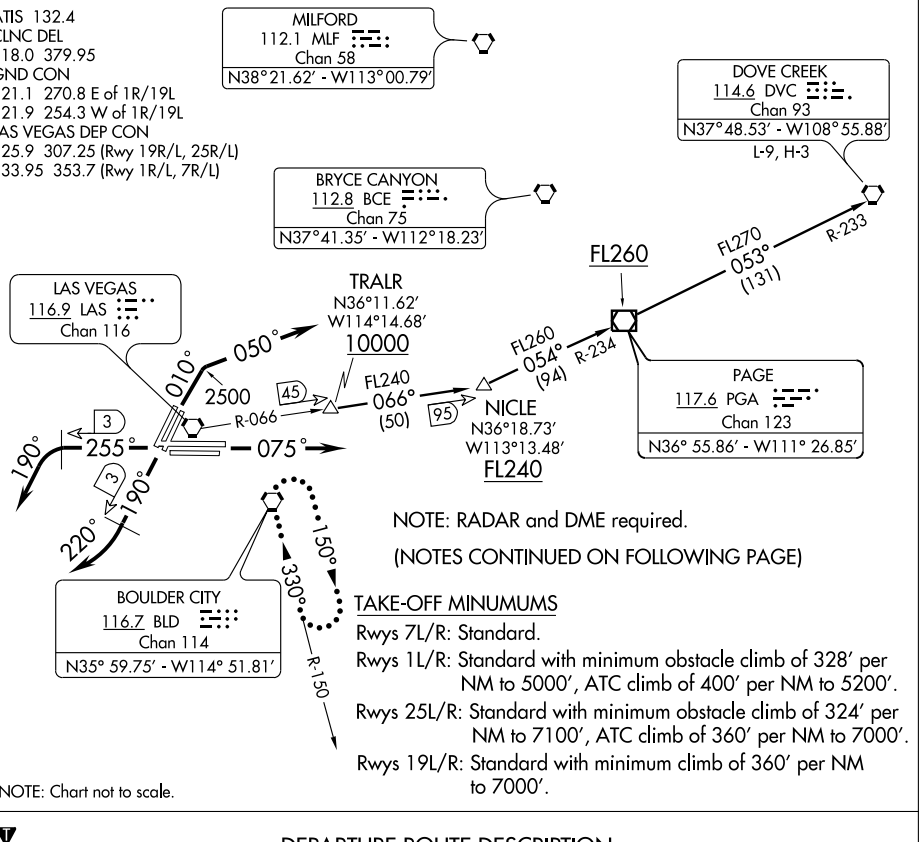
At PRINO WP, execute ILS RWY 25L approach. If unable, proceed direct LAS VORTAC, then direct BLD VORTAC and hold, maintain 8000′.

ST-662 (FAA)

MC CARRAN INTL
LAS VEGAS, NEVADA

LAS VEGAS THREE DEPARTURE

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS DEP CON
125.9 307.25 (Rwy 19R/L, 25R/L)
133.95 353.7 (Rwy 1R/L, 7R/L)



NOTE: RADAR and DME required.

(NOTES CONTINUED ON FOLLOWING PAGE)

TAKE-OFF MINUMUMS

Rwys 7L/R: Standard.

Rwys 1L/R: Standard with minimum obstacle climb of 328′ per NM to 5000′, ATC climb of 400′ per NM to 5200′.

Rwys 25L/R: Standard with minimum obstacle climb of 324′ per NM to 7100′, ATC climb of 360′ per NM to 7000′.

Rwys 19L/R: Standard with minimum climb of 360′ per NM to 7000′.

NOTE: Chart not to scale.

V

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 1L/R: Climb via heading 010° to 2500, then climbing right turn via heading 050°, thence ....

TAKE-OFF RUNWAYS 7L/R: Climb via heading 075°, thence ....

TAKE-OFF RUNWAYS 19L/R: Climb via heading 190° until LAS VORTAC 3 DME, then right turn via heading 220°, thence ....

TAKE-OFF RUNWAYS 25L/R: Climb via heading 255° until LAS VORTAC 3 DME, then left turn via heading 190°, thence ....

.... via radar vector to transition or assigned route, maintain 7000′, expect clearance to filed altitude two minutes after departure.

LOST COMMUNICATIONS: If no contact with ATC upon reaching 7000′, proceed direct BLD VORTAC then climb in BLD VORTAC holding pattern to appropriate MEA for route of flight.

DOVE CREEK TRANSITION (LAS3.DVC): From over TRALR INT via LAS R-066 to NICLE INT, then via PGA R-234 to PGA VOR/DME, then via PGA R-053 and DVC R-233 to DVC VORTAC.

LAS VEGAS THREE DEPARTURE

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple buildings 3954′ from DER, 1 NM left of centerline, up to 283′ AGL/2409′ MSL.
Pole 450′ from DER, 283′ left of centerline, 38′ AGL/2118′ MSL.
Obstacle light on wind sock 248′ from DER, 224′ right of centerline, 50′ AGL/2104′ MSL.
Pole 1029′ from DER, 715′ left of centerline, 85′ AGL/2124′ MSL.
Tree 1536′ from DER, 502′ left of centerline, 100′ AGL/2132′ MSL.

RWY 1R: Sign 1331′ from DER, 448′ right of centerline, 60′ AGL/2120′ MSL
Building 599′ from DER, 541′ right of centerline, 70′ AGL/2096′ MSL
Multiple buildings 4878′ from DER, 1.2 NM left of centerline, up to 283′ AGL/2409′ MSL.

RWY 25R: Light pole 3115′ from DER, 1033′ right of centerline, 109′ AGL/2301′ MSL.
Light on pole 1.5 NM from DER, 2836′ left of centerline, 124′ AGL/2457′ MSL.
Road 1.7 NM from DER, 2965′ left of centerline, 139′ AGL/2469′ MSL.
Light on pole 1100′ from DER, 508′ left of centerline, 47′ AGL/2226′ MSL.
Building 1822′ from DER, 652′ left of centerline, 46′ AGL/2238′ MSL.
Building 2202′ from DER, 596′ left of centerline, 44′ AGL/2246′ MSL.
Rod on building 534′ from DER, 369′ left of centerline, 33′ AGL/2202′ MSL.
Road 678′ from DER, 16′ right of centerline, 35′ AGL/2201′ MSL.
Light on localizer antenna 533′ from DER, 32′ AGL/2195′ MSL.

RWY 25L: Pole 2860′ from DER, 813′ left of centerline, 57′ AGL/2236′ MSL.
Sign 3672′ from DER, 1302′ left of centerline, 57′ AGL/2256′ MSL.
Antenna on building 1002′ from DER, 251′ left of centerline, 34′ AGL/2183′ MSL.
Pole 3677′ from DER, 145′ left of centerline, 67′ AGL/2249′ MSL.

RWY 7L: Tree 1257′ from DER, 789′ left of centerline, 85′ AGL/2077′ MSL.
Light pole 747′ from DER, 441′ right of centerline, 62′ AGL/2057′ MSL.
Tree 1007′ from DER, 557′ right of centerline, 70′ AGL/2062′ MSL.

RWY 7R: Light on wind sock 102′ from DER, 300′ right of centerline, 30′ AGL/2051′ MSL.

RWY 19L: Pole 1394′ from DER, 533′ right of centerline, 36′ AGL/2236′ MSL.
Sign 2181′ from DER, 1062′ right of centerline, 50′ AGL/2256′ MSL.
Rod on building 2921′ from DER, 581′ right of centerline, 50′ AGL/2262′ MSL.
Pole 2633′ from DER, 319′ right of centerline, 40′ AGL/2246′ MSL.

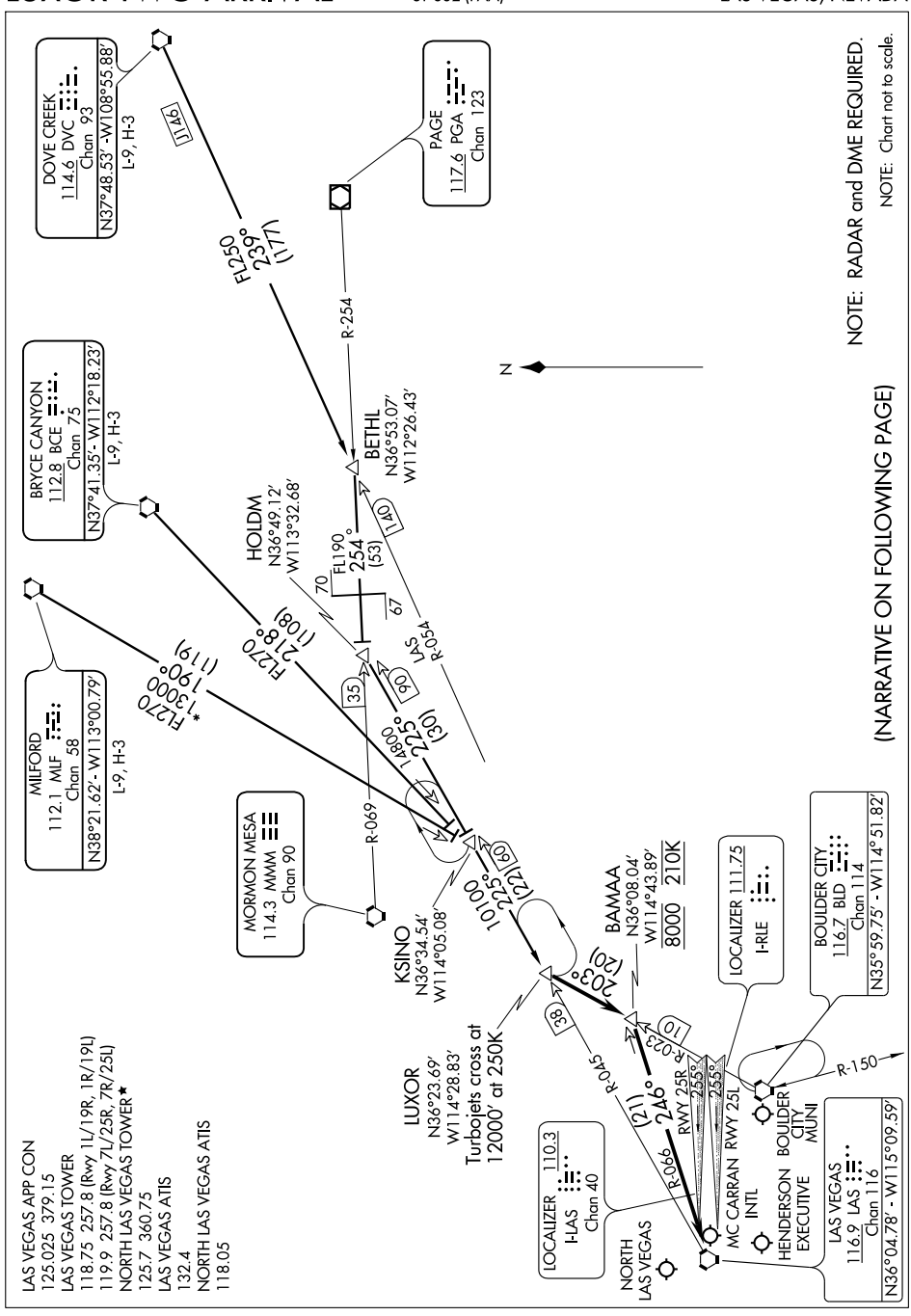
RWY 19R: Pole 1135′ from DER, 619′ right of centerline, 65′ AGL/2249′ MSL.
Pole 756′ from DER, 618′ right of centerline, 50′ AGL/2231′ MSL.
Sign 2182′ from DER, 125′ right of centerline, 50′ AGL/2256′ MSL.
Pole 1396′ from DER, 403′ left of centerline, 55′ AGL/2236′ MSL.
Rod on building 197′ from DER, 441′ right of centerline, 30′ AGL/2202′ MSL.
Rod on building 2922′ from DER, 356′ left of centerline, 50′ AGL/2262′ MSL.

SW-4, 14 JAN 2010 to 11 FEB 2010

LUXOR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



ARRIVAL DESCRIPTION

BETHL TRANSITION (BETHL.LUXOR2): From over BETHL INT via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

BRYCE CANYON TRANSITION (BCE.LUXOR2): From over BCE VORTAC via BCE R-218 and LAS R-045 to LUXOR INT. Thence. . . .

DOVE CREEK TRANSITION (DVC.LUXOR2): From over DVC VORTAC via DVC R-239 and LAS R-054 to BETHL INT, then via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

MILFORD TRANSITION (MLF.LUXOR2): From over MLF VORTAC via MLF R-190 and LAS R-045 to LUXOR INT. Thence. . . .

. . . .From over LUXOR INT via BLD R-023 to BAMAA INT, thence via LAS R-066 to LAS VORTAC. Thence. . . .

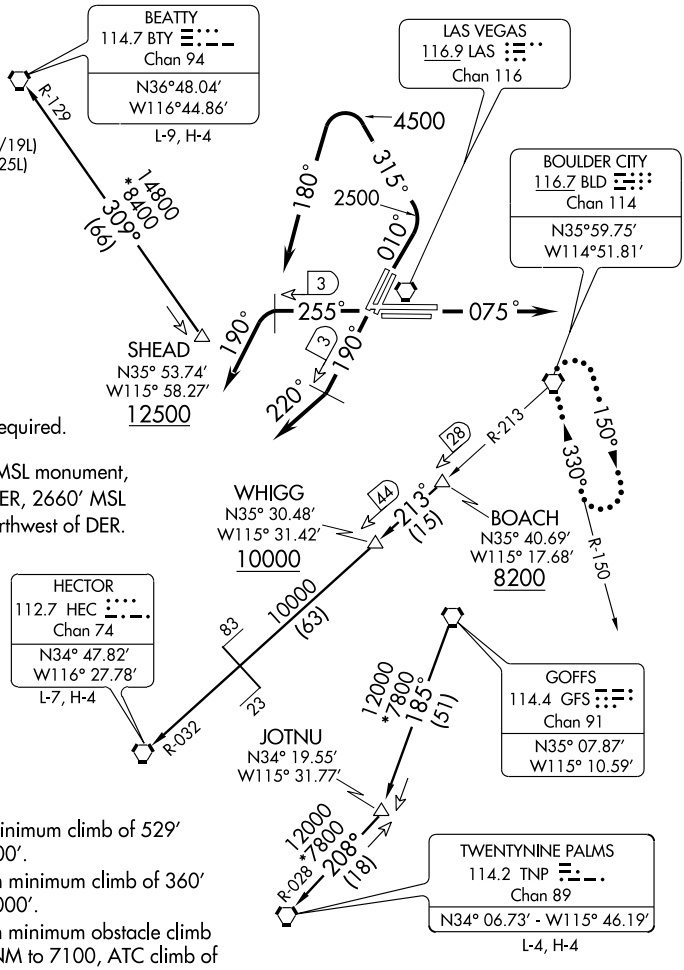
LANDING MC CARRAN INTL: All runways expect radar vectors to final approach course.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After LAS VORTAC proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

MCCARRAN THREE DEPARTURE

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25



NOTE: RADAR and DME required.

NOTE: Rwys 1L/R 3189′ MSL monument, 2.7 NM north of DER, 2660′ MSL building, 1 NM northwest of DER.

TAKE-OFF MINUMUMS

Rwys 1L/R: 1100-3 with minimum climb of 529′ per NM to 7000′.

Rwys 19L/R: Standard with minimum climb of 360′ per NM to 7000′.

Rwys 25L/R: Standard with minimum obstacle climb of 324′ per NM to 7100, ATC climb of 360′ per NM to 7000.

Rwys 7L/R: Standard with minimum ATC climb of 440′ per NM to 7000′.

TAKE-OFF OBSTACLE NOTES

RWY 1L: Pole 450′ from DER, 283′ left of centerline, 38′ AGL/2118′ MSL.
Obstacle light on wind sock 248′ from DER, 224′ right of centerline, 50′ AGL/2104′ MSL.
Pole 1029′ from DER, 715′ left of centerline, 85′ AGL/2124′ MSL.
Tree 1536′ from DER, 502′ left of centerline, 100′ AGL/2132′ MSL.

RWY 1R: Sign 1331′ from DER, 448′ right of centerline, 60′ AGL/2120′ MSL
Building 599′ from DER, 541′ right of centerline, 70′ AGL/2096′ MSL

(NOTES CONTINUED ON FOLLOWING PAGE)

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

SW-4, 14 JAN 2010 to 11 FEB 2010

MCCARRAN THREE DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 1L/R: Climb via heading 010° to 2500′, then climbing left turn via heading 315° to 4500′, then climbing left turn heading 180°, thence ....

TAKE-OFF RUNWAYS 7L/R: Climb via heading 075°, thence ....

TAKE-OFF RUNWAYS 19L/R: Climb via heading 190° until LAS VORTAC 3 DME, then right turn via heading 220°, thence ....

TAKE-OFF RUNWAYS 25L/R: Climb via heading 255° until LAS VORTAC 3 DME, then left turn via heading 190°, thence ....

....via radar vectors to transition or assigned route, maintain 7000′, expect clearance to filed altitude 2 minutes after departure.

LOST COMMUNICATIONS: If no contact with ATC upon reaching 7000′, proceed direct BLD VORTAC, then climb in BLD VORTAC holding pattern to the appropriate MEA for route of flight.

BEATTY TRANSITION (MCCRN3.BTY): From over SHEAD INT via BTY R-129 to BTY VORTAC.

HECTOR TRANSITION (MCCRN3.HEC): From over BOACH INT via BLD R-213 and HEC R-032 to HEC VORTAC.

TWENTY NINE PALMS TRANSITION (MCCRN3.TNP): From over GFS VORTAC via GFS R-185 to JOTNU INT, then via TNP R-028 to TNP VORTAC.

TAKE-OFF OBSTACLE NOTES (CONTINUED)

RWY 25R: Light pole 3115′ from DER, 1033′ right of centerline, 109′ AGL/2301′ MSL.
Light on pole 1.5 NM from DER, 2836′ left of centerline, 124′ AGL/2457′ MSL.
Light pole 1.7 NM from DER, 2965′ left of centerline, 139′ AGL/2469′ MSL.
Light on pole 1100′ from DER, 508′ left of centerline, 47′ AGL/2226′ MSL.
Building 1822′ from DER, 652′ left of centerline, 46′ AGL/2238′ MSL.
Building 2202′ from DER, 596′ left of centerline, 44′ AGL/2246′ MSL.
Rod on building 534′ from DER, 369′ left of centerline, 33′ AGL/2202′ MSL.
Road 678′ from DER, 16′ right of centerline, 35′ AGL/2201′ MSL.
Light on localizer antenna 533′ from DER, 32′ AGL/2195′ MSL.

RWY 25L: Pole 2860′ from DER, 813′ left of centerline, 57′ AGL/2236′ MSL.
Sign 3672′ from DER, 1302′ left of centerline, 57′ AGL/2256′ MSL.
Antenna on building 1002′ from DER, 251′ left of centerline, 34′ AGL/2183′ MSL.
Pole 3677′ from DER, 145′ left of centerline, 67′ AGL/2249′ MSL.

RWY 7L: Tree 1257′ from DER, 789′ left of centerline, 85′ AGL/2077′ MSL.
Light pole 747′ from DER, 441′ right of centerline, 62′ AGL/2057′ MSL.
Tree 1007′ from DER, 557′ right of centerline, 70′ AGL/2062′ MSL.

RWY 7R: Light on wind sock 102′ from DER, 300′ right of centerline, 30′ AGL/2051′ MSL.

RWY 19L: Pole 1394′ from DER, 533′ right of centerline, 36′ AGL/2236′ MSL.
Sign 2181′ from DER, 1062′ right of centerline, 50′ AGL/2256′ MSL.
Rod on building 2921′ from DER, 581′ right of centerline, 50′ AGL/2262′ MSL.
Pole 2633′ from DER, 319′ right of centerline, 40′ AGL/2246′ MSL.

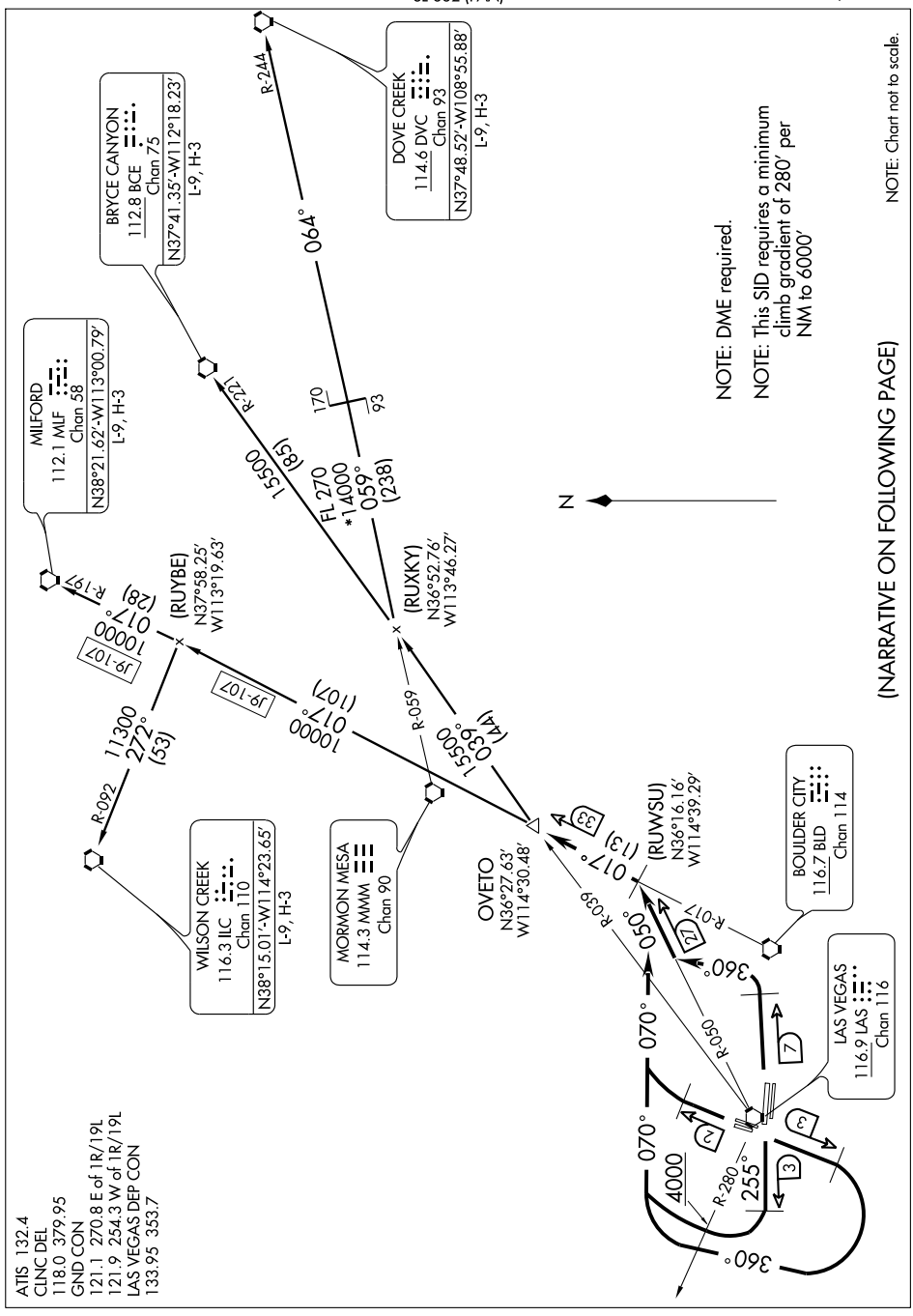
RWY 19R: Pole 1135′ from DER, 619′ right of centerline, 65′ AGL/2249′ MSL.
Pole 756′ from DER, 618′ right of centerline, 50′ AGL/2231′ MSL.
Sign 2182′ from DER, 125′ right of centerline, 50′ AGL/2256′ MSL.
Pole 1396′ from DER, 403′ left of centerline, 55′ AGL/2236′ MSL.
Rod on building 197′ from DER, 441′ right of centerline, 30′ AGL/2202′ MSL.
Rod on building 2922′ from DER, 356′ left of centerline, 50′ AGL/2262′ MSL.

SW-4, 14 JAN 2010 to 11 FEB 2010

OVETO THREE DEPARTURE

SL-662 (FAA)

LAS VEGAS/MC CARRAN INTL (LAS)
LAS VEGAS, NEVADA



V

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 1L/R: Climb on runway heading until reaching LAS 2 DME then turn right heading 070° to intercept LAS R-050 to 27 DME; intercept BLD R-017 to OVETO 33 DME; then via (transition) or (assigned route). Aircraft filing 17000′ or above expect filed altitude/flight level ten minutes after departure.
TAKE-OFF RUNWAYS 7L/R: Climb on runway heading until reaching LAS 7 DME then turn left heading 360° to intercept LAS R-050 to 27 DME; maintain 8000′. Intercept BLD R-017 to OVETO 33 DME, then via (transition) or (assigned route). Aircraft filing 17000′ or above expect filed altitude/flight level ten minutes after departure.
TAKE-OFF RUNWAYS 19L/R: Climb on runway heading until reaching LAS 3 DME then turn right heading 360° until crossing LAS R-280, then climbing right turn heading 070° to intercept LAS R-050 to 27 DME; intercept BLD R-017 to OVETO 33 DME, then via (transition) or (assigned route). Aircraft filing 17000′ or above expect filed altitude/flight level ten minutes after departure.
TAKE-OFF RUNWAYS 25L/R: Climb on runway heading 255° until LAS 3 DME, then turn right heading 070° to cross LAS R-280 at or above 4000′, continue heading 070° to intercept LAS R-050 to 27 DME; intercept BLD R-017 to OVETO 33 DME, then via (transition) or (assigned route). Aircraft filing 17000′ or above, expect filed altitude/flight level ten minutes after departure.
BRYCE CANYON TRANSITION (OVETO3.BCE): From over OVETO INT via LAS R-039 and BCE R-221 to BCE VORTAC.
DOVE CREEK TRANSITION (OVETO3.DVC): From over OVETO INT via LAS R-039 to intercept MMM R-059, then via MMM R-059 and DVC R-244 to DVC VORTAC.
MILFORD TRANSITION (OVETO3.MLF): From over OVETO INT via BLD R-017 and MLF R-197 to MLF VORTAC.
WILSON CREEK TRANSITION (OVETO3.ILC): From over OVETO INT via BLD R-017 and MLF R-197 to ILC R-092, then via ILC R-092 to ILC VORTAC.

SW-4, 14 JAN 2010 to 11 FEB 2010

PRFUM TWO DEPARTURE (RNAV)

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25

TAKE-OFF MINIMUMS

Runways 1L/R, 7L/R, NA- air traffic.

Runways 19L/R, standard with minimum climb of 335′ per NM to 15500.

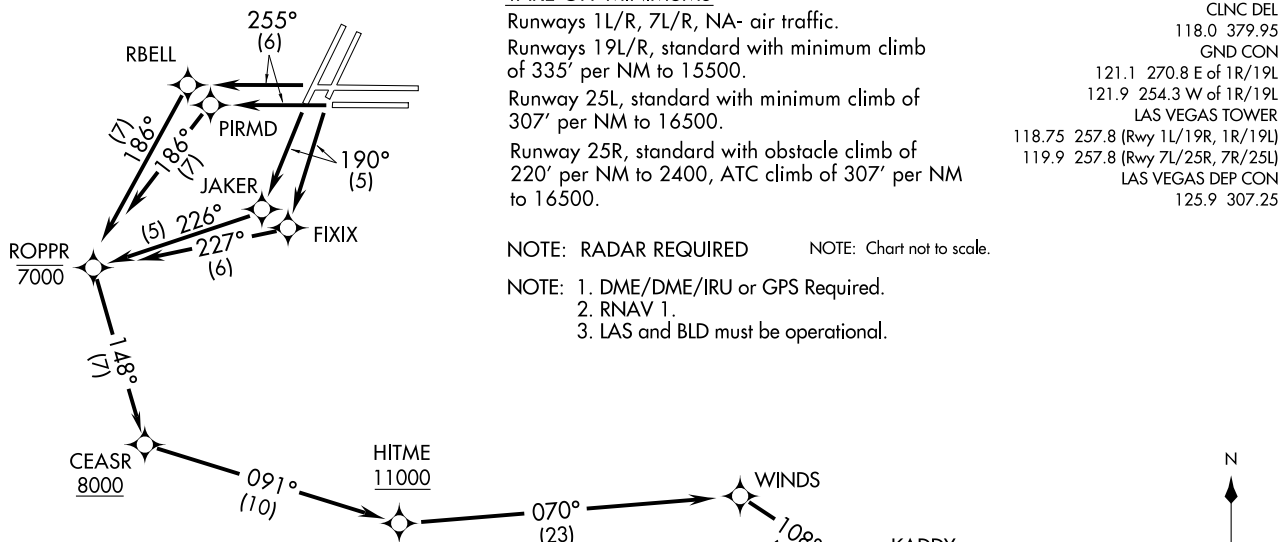
Runway 25L, standard with minimum climb of 307′ per NM to 16500.

Runway 25R, standard with obstacle climb of 220′ per NM to 2400, ATC climb of 307′ per NM to 16500.

NOTE: RADAR REQUIRED

NOTE: Chart not to scale.

NOTE: 1. DME/DME/IRU or GPS Required.
2. RNAV 1.
3. LAS and BLD must be operational.



TAKE-OFF OBSTACLE NOTES

RWY 19L: Multiple poles, sign, and building 1394 feet from departure end of rwy, 320 feet right of centerline, up to 51′ AGL/2256′ MSL.

RWY 19R: Multiple poles, sign, and building 197 feet from departure end of rwy, 125 feet right of centerline, up to 51′ AGL/2256′ MSL.
Multiple poles and building 1396 feet from departure end of rwy, 356 feet left of centerline, up to 47′ AGL/2262′ MSL.

RWY 25L: Multiple poles, sign, and building 1003 feet from departure end of rwy, 251 feet left of centerline, up to 63′ AGL/2256′ MSL.

RWY 25R: Multiple poles and road 675 feet from departure end of rwy, 17 feet right of centerline, up to 100′ AGL/2301′ MSL.
Multiple poles and buildings 533 feet from departure end of rwy, 1 foot left of centerline, up to 150′ AGL/2469′ MSL.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 19L: Climb via 190° course to FIXIX WP, then via 227° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 070° track to WINDS WP, then via 108° track to cross KADDY WP at or above FL200, then via 108° track to PRFUM WP. Thence....

TAKE-OFF RUNWAY 19R: Climb via 190° course to JAKER WP, then via 226° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 070° track to WINDS WP, then via 108° track to cross KADDY WP at or above FL200, then via 108° track to PRFUM WP. Thence....

TAKE-OFF RUNWAY 25L: Climb via 255° course to PIRMD WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 070° track to WINDS WP, then via 108° track to cross KADDY WP at or above FL200, then via 108° track to PRFUM WP. Thence....

TAKE-OFF RUNWAY 25R: Climb via 255° course to RBELL WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 091° track to cross HITME WP at or above 11000, then via 070° track to WINDS WP, then via 108° track to cross KADDY WP at or above FL200, then via 108° track to PRFUM WP. Thence....

....via (Transition) maintain FL190, expect filed altitude 10 minutes after departure.

DRAKE TRANSITION (PRFUM2.DRK)

SW-4, 14 JAN 2010 to 11 FEB 2010

WAAS CH 42800 W01A	APP CRS 010°	Rwy ldg 8681 TDZE 2170 Apt Elev 2181

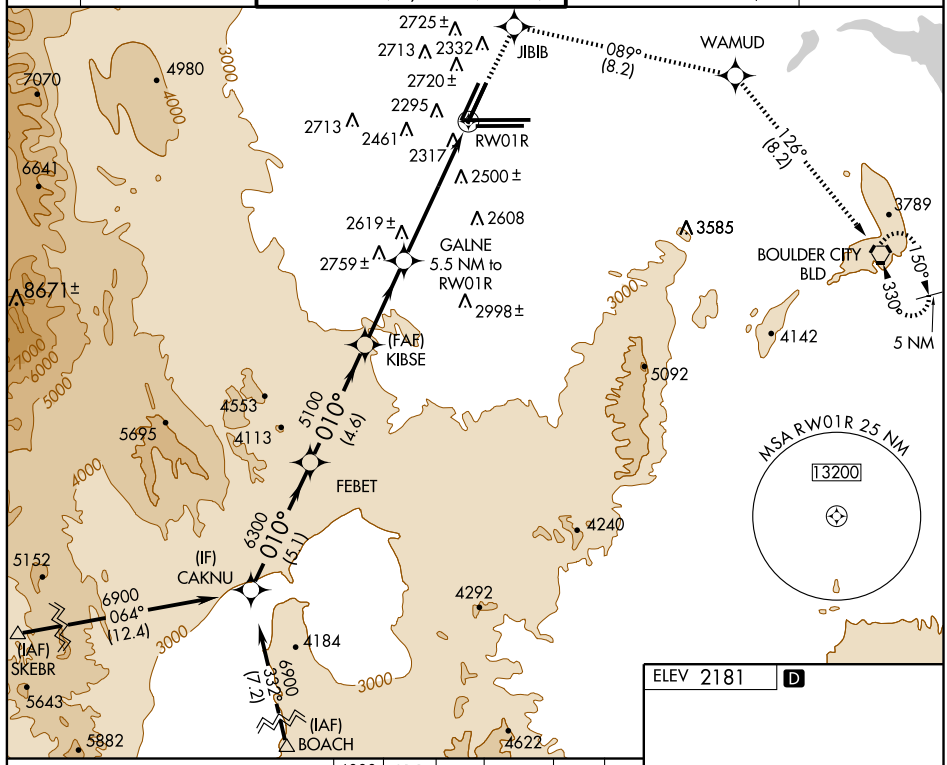
RNAV (GPS) RWY 1R

LAS VEGAS/MC CARRAN INTL (LAS)

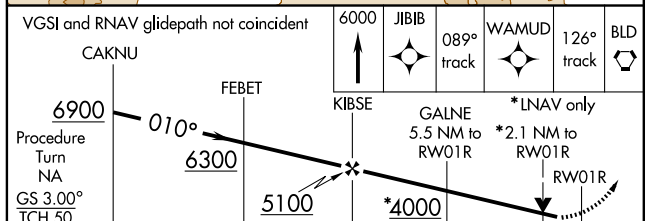
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 6000 direct JIBIB and via 089° track to WAMUD and via 126° track to BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95

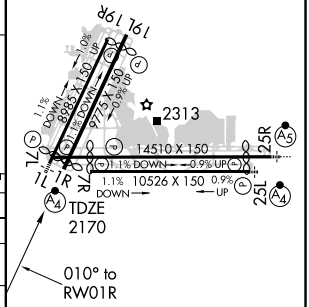


VGSI and RNAV glidepath not coincident



CATEGORY	A	B	C	D
LPV DA	2693-1¾ 523 (600-1¾)			
LNAV/VNAV DA	NA			
LNAV MDA	2920-1 750 (800-1)	2920-1¼ 750 (800-1¼)	2920-2¼ 750 (800-2¼)	2920-2½ 750 (800-2½)
CIRCLING	3020-1¾ 839 (900-1¾)		3020-2½ 839 (900-2½)	3020-2¾ 839 (900-2¾)

ELEV 2181 D



REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

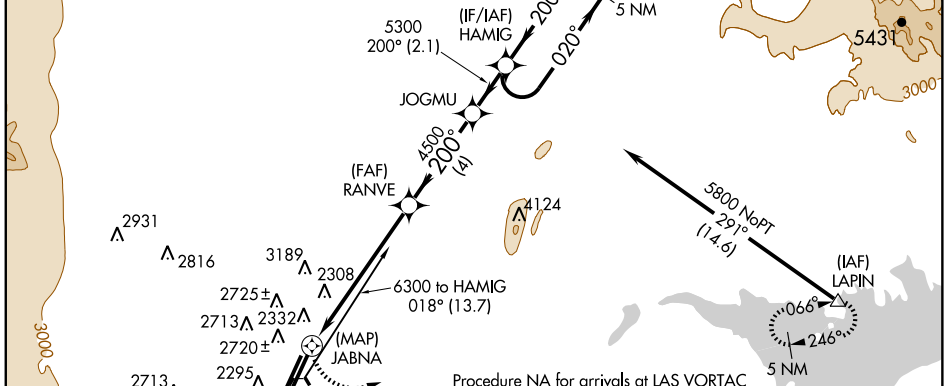
RNAV (GPS) RWY 19L
LAS VEGAS/MC CARRAN INTL (LAS)

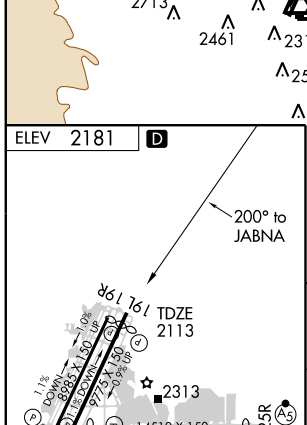
APP CRS	Rwy ldg	8745
200°	TDZE	2113
	Apt Elev	2181

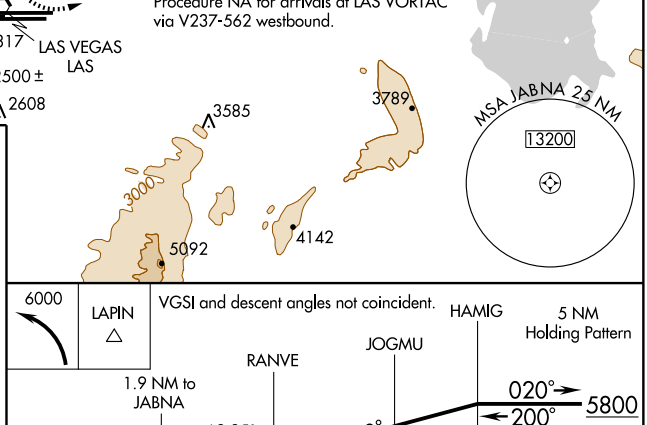
If local altimeter setting not received, use North Las Vegas altimeter setting and increase all MDAs 40 feet.
DME/DME RNP- 0.3 NA.
VDP NA when using North Las Vegas altimeter setting.

MISSED APPROACH: Climbing left turn to 6000 direct LAPIN and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95







CATEGORY	A	B	C	D
LNAV MDA	2920-1 807 (800-1)	2920-1¼ 807 (800-1¼)	2920-2¼ 807 (800-2¼)	2920-2½ 807 (800-2½)
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3080-2¾ 899 (900-2¾)	3080-3 899 (900-3)

REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

APP CRS	Rwy ldg	8397
201°	TDZE	2117
	Apt Elev	2181

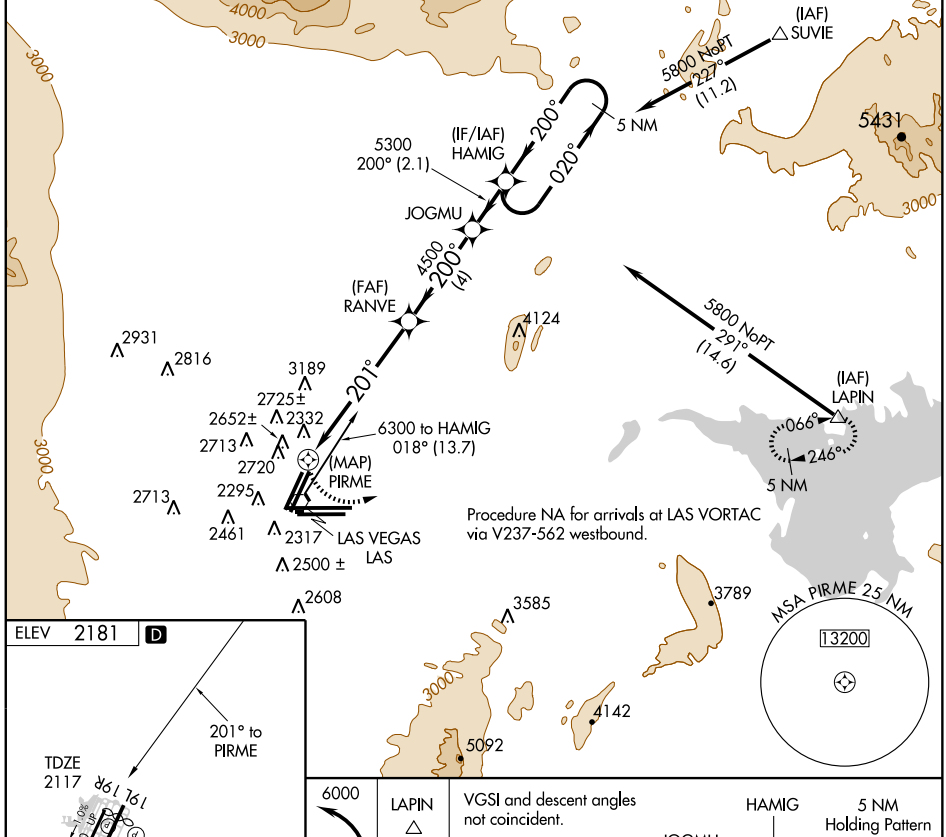
RNAV (GPS) RWY 19R

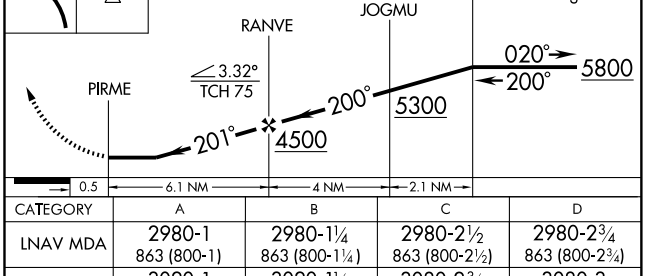
LAS VEGAS/MC CARRAN INTL (LAS)

If local altimeter setting not received, use North Las Vegas altimeter setting and increase all MDAs 40 feet.
DME/DME RNP- 0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing left turn to 6000 direct LAPIN and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95





CATEGORY	A	B	C	D
LNAV MDA	2980-1 863 (800-1)	2980-1¼ 863 (800-1¼)	2980-2½ 863 (800-2½)	2980-2¾ 863 (800-2¾)
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3080-2¾ 899 (900-2¾)	3080-3 899 (900-3)

REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

SHEAD FIVE DEPARTURE (RNAV)

TAKE-OFF MINIMUMS

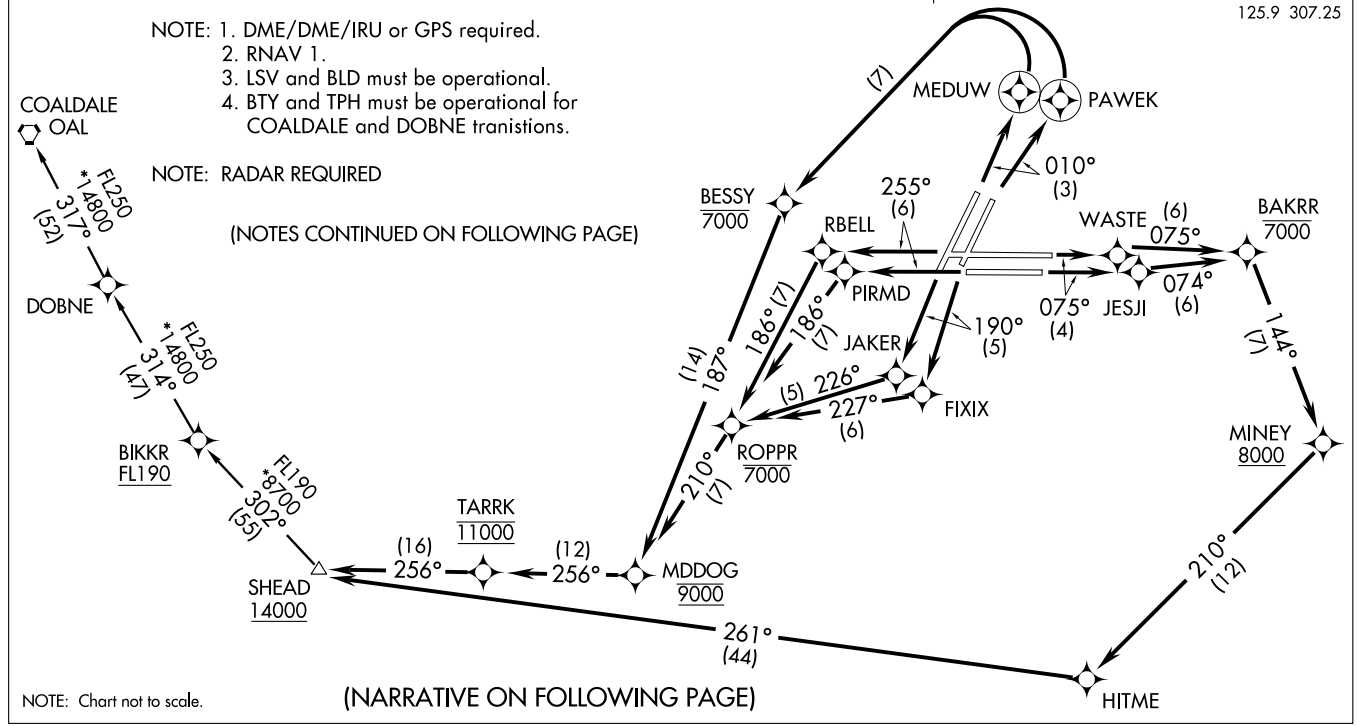
Runway 1L, 1100-3 with minimum climb of 490′ per NM to 7000.
Runway 1R, 1100-3 with minimum climb of 500′ per NM to 7000.
Runways 7L/R, standard with minimum climb of 400′ per NM to 8000.
Runways 19L/R, standard with minimum climb of 408′ per NM to 9000.
Runway 25L, standard with minimum climb of 382′ per NM to 9000.
Runway 25R, standard with minimum obstacle climb of 220′ per NM to 2400, ATC climb of 387′ per NM to 9000.

NOTE: 1. DME/DME/IRU or GPS required.
2. RNAV 1.
3. LSV and BLD must be operational.
4. BTY and TPH must be operational for COALDALE and DOBNE tranistions.

NOTE: RADAR REQUIRED

(NOTES CONTINUED ON FOLLOWING PAGE)

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25



NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 1L: Climb via 010° course to MEDUW, then left turn direct to cross BESSY at or below 7000, then via 187° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 1R: Climb via 010° course to PAWEK, then left turn direct to cross BESSY at or below 7000, then via 187° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 7L: Climb via 075° course to WASTE, then via 075° track to cross BAKRR at or below 7000, then via 144° track to cross MINEY at or above 8000, then via 210° track to HITME, then via 261° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 7R: Climb via 075° course to JESJI, then via 074° track to cross BAKRR at or below 7000, then via 144° track to cross MINEY at or above 8000, then via 210° track to HITME, then via 261° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 19L: Climb via 190° course to FIXIX, then via 227° track to cross ROPPR at or below 7000, then via 210° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 19R: Climb via 190° course to JAKER, then via 226° track to cross ROPPR at or below 7000, then via 210° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 25L: Climb via 255° course to PIRMD, then via 186° track to cross ROPPR at or below 7000, then via 210° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

TAKE-OFF RUNWAY 25R: Climb via 255° course to RBELL, then via 186° track to cross ROPPR at or below 7000, then via 210° track to cross MDDOG at 9000, then via 256° track to cross TARRK at 11000, then via 256° track to cross SHEAD at or above 14000. Thence. . . .

....via (Transition) maintain FL190, expect filed altitude 10 minutes after departure

COALDALE TRANSITION (SHEAD5.OAL)

DOBNE TRANSITION (SHEAD5.DOBNE)

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple poles, tree, and building 450 feet from DER, 283 feet left of centerline, up to 174′ AGL/2132′ MSL.
OL on windsock 248 feet from DER, 224 feet right of centerline, 15′ AGL/2104′ MSL.

RWY 1R: Multiple signs and building 1331 feet from DER, 448 feet right of centerline, up to 100′ AGL/2120′ MSL.

RWY 7L: Multiple poles and trees 747 feet from DER, 442 feet right of centerline, up to 62′ AGL/2062′ MSL.
Tree 1257 feet from DER, 789 feet left of centerline, 65′ AGL/2077′ MSL.

RWY 7R: Lighted windsock 126 feet from DER, 290 feet right of centerline, 25′ AGL/2051′ MSL.

RWY 19L: Multiple poles, sign, and building 1394 feet from DER, 320 feet right of centerline, up to 51′ AGL/2256′ MSL.

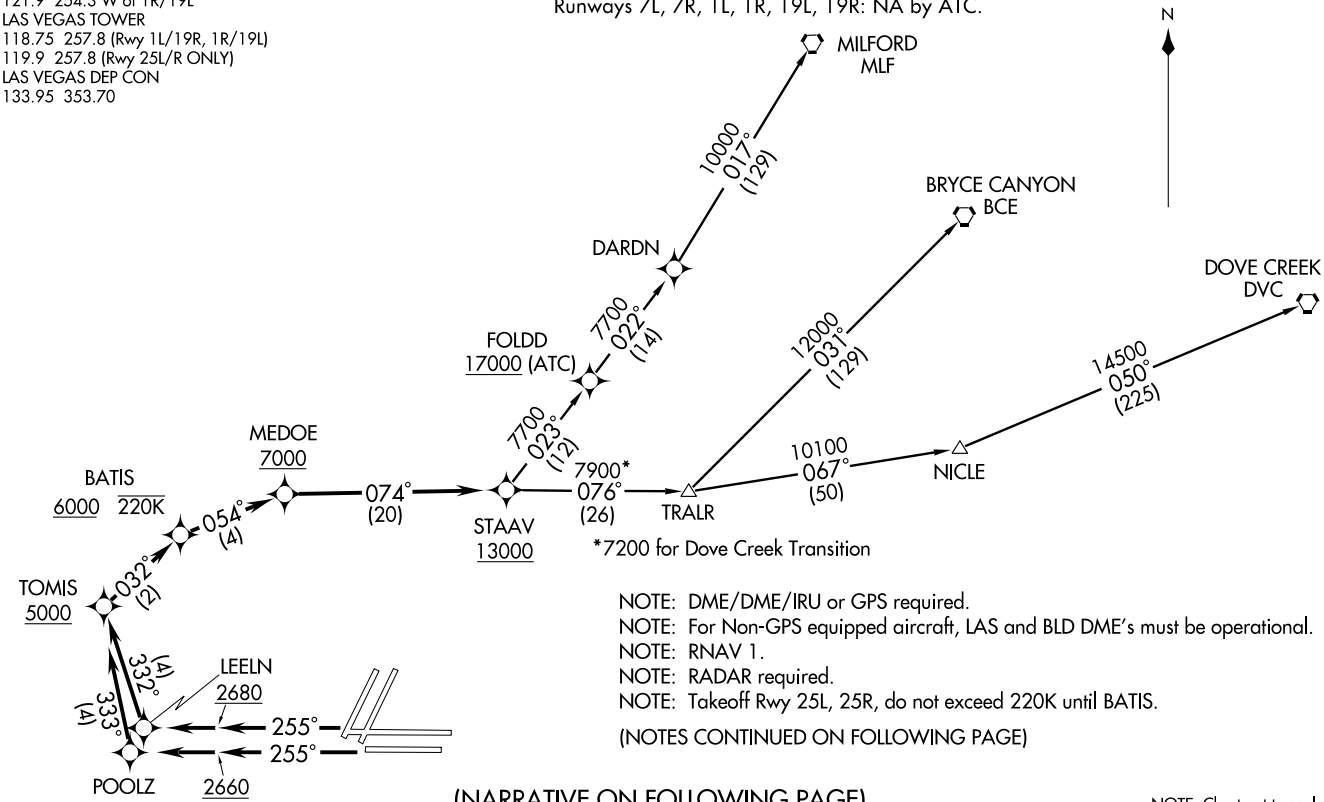
RWY 19R: Multiple poles, sign, and building 197 feet from DER, 125 feet right of centerline, up to 51′ AGL/2256′ MSL.
Multiple poles and building 1396 feet from DER, 356 feet left of centerline, up to 47′ AGL/2262′ MSL.

RWY 25L: Multiple poles, sign, and building 1003 feet from DER, 251 feet left of centerline, up to 63′ AGL/2256′ MSL.

RWY 25R: Multiple poles and road 675 feet from DER, 17 feet right of centerline, up to 100′ AGL/2301′ MSL.
Multiple poles and buildings 533 feet from DER, 1 foot left of centerline, up to 150′ AGL/2469′ MSL.

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 25L/R ONLY)
LAS VEGAS DEP CON
133.95 353.70

TAKE-OFF MINIMUMS
Runway 25L: Standard. ATC climb of 330′ per NM to 13000.
Runway 25R: 300-2 or Standard with minimum climb of 313′ per NM to 4500.
ATC climb of 330′ per NM to 13000.
Runways 7L, 7R, 1L, 1R, 19L, 19R: NA by ATC.



NOTE: DME/DME/IRU or GPS required.
NOTE: For Non-GPS equipped aircraft, LAS and BLD DME's must be operational.
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: Takeoff Rwy 25L, 25R, do not exceed 220K until BATIS.

(NOTES CONTINUED ON FOLLOWING PAGE)

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

(STAAV4.STAAV) 09351
STAAV FOUR DEPARTURE (RNAV)
SL-662 (FAA)
LAS VEGAS/MC CARRAN INTL (LAS)
LAS VEGAS, NEVADA

STAAV FOUR DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 25R: Climb heading 255° to 2680′, then direct LEELN, then via 332° track to cross TOMIS at or above 5000′, then via 032° track to cross BATIS at or above 6000′, then via 054° track to cross MEDOE at or above 7000′, then via 074° track to cross STAAV at or above 13000, thence....

TAKE-OFF RUNWAY 25L: Climb heading 255° to 2660′, then direct POOLZ, then via 333° track to cross TOMIS at or above 5000′, then via 032° track to cross BATIS at or above 6000′, then via 054° track to cross MEDOE at or above 7000′, then via 074° track to cross STAAV at or above 13000, thence....

... via (transition) maintain FL190, expect filed altitude 10 minutes after departure.

BRYCE CANYON TRANSITION (STAAV4.BCE)
DOVE CREEK TRANSITION (STAAV4.DVC)
MILFORD TRANSITION (STAAV4.MLF)

TAKE-OFF OBSTACLE NOTES

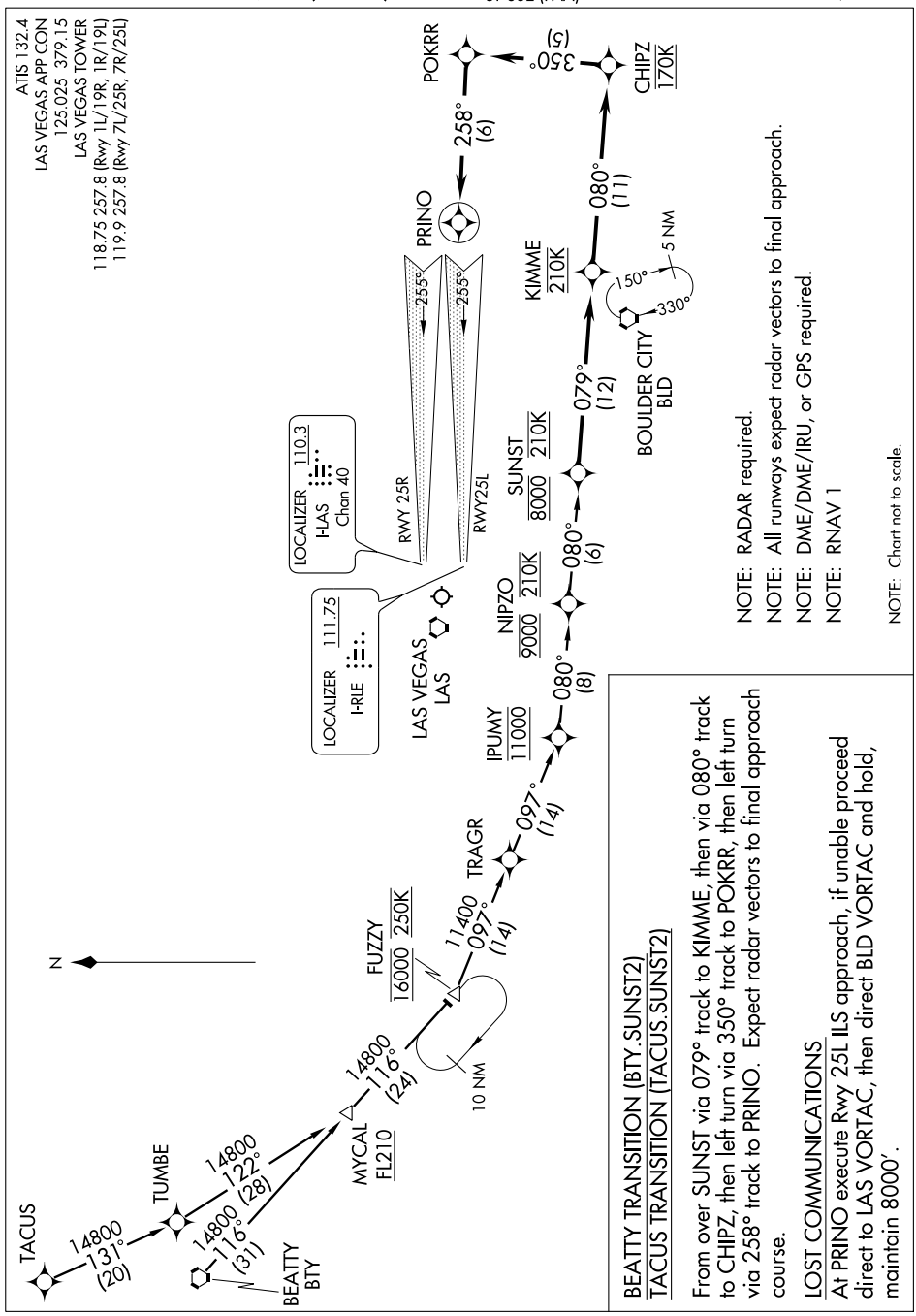
Rwy 25R: Lt. pole 3115′ from DER, 1033′ right of centerline, 92′ AGL/2301′ MSL.
Multiple Lt. poles beginning 1.6 NM from DER, 2836′ left of centerline, up to 130′ AGL/2469′ MSL.
OL on sign 884′ from DER, 710′ left of centerline, 34′ AGL/2233′ MSL.
Multiple trees beginning 953′ from DER, 522′ right of centerline, up to 44′ AGL/2237′ MSL.
Multiple trees beginning 954′ from DER, 546′ left of centerline, up to 40′ AGL/2245′ MSL.
OL DME 533′ from DER, 445′ left of centerline, 18′ AGL/2207′ MSL.
Bldg 1822′ from DER, 652′ left of centerline, 59′ AGL/2238′ MSL.
Road 669′ from DER, 477′ left of centerline, 29′ AGL/2208′ MSL.
Rod on bldg 534′ from DER, 369′ left of centerline, 13′ AGL/2202′ MSL.
Road 678′ from DER, 17′ right of centerline, 15′ AGL/2201′ MSL.
OL on LOC 534′ from DER, 1′ from centerline, 6′ AGL/2195′ MSL.

Rwy 25L: Pole 2861′ from DER, 813′ left of centerline, 36′ AGL/2236′ MSL.
Sign 3672′ from DER, 1303′ left of centerline, 37′ AGL/2256′ MSL.
RR 2564′ from DER, 773′ left of centerline, 17′ AGL/2223′ MSL.
Tree 2838′ from DER, 1008′ left of centerline, 21′ AGL/2230′ MSL.
Ant. on bldg 1003′ from DER, 251′ left of centerline, 13′ AGL/2183′ MSL.
Pole 3677′ from DER, 145′ left of centerline, 40′ AGL/2249′ MSL.
Bldg 4719′ from DER, 1757′ left of centerline, 61′ AGL/2290′ MSL.
Bldg 4953′ from DER, 1697′ left of centerline, 61′ AGL/2291′ MSL.
Bldg 4612′ from DER, 1400′ left of centerline, 54′ AGL/2281′ MSL.

SUNST TWO ARRIVAL (RNAV)

ST-662 (FAA)

MC CARRAN INTL
LAS VEGAS, NEVADA



NOTE: RADAR required.
NOTE: All runways expect radar vectors to final approach.
NOTE: DME/DME/IRU, or GPS required.
NOTE: RNAV 1

NOTE: Chart not to scale.

BEATTY TRANSITION (BTY.SUNST2)
TACUS TRANSITION (TACUS.SUNST2)

From over SUNST via 079° track to KIMME, then via 080° track to CHIPZ, then left turn via 350° track to POKRR, then left turn via 258° track to PRINO. Expect radar vectors to final approach course.

LOST COMMUNICATIONS

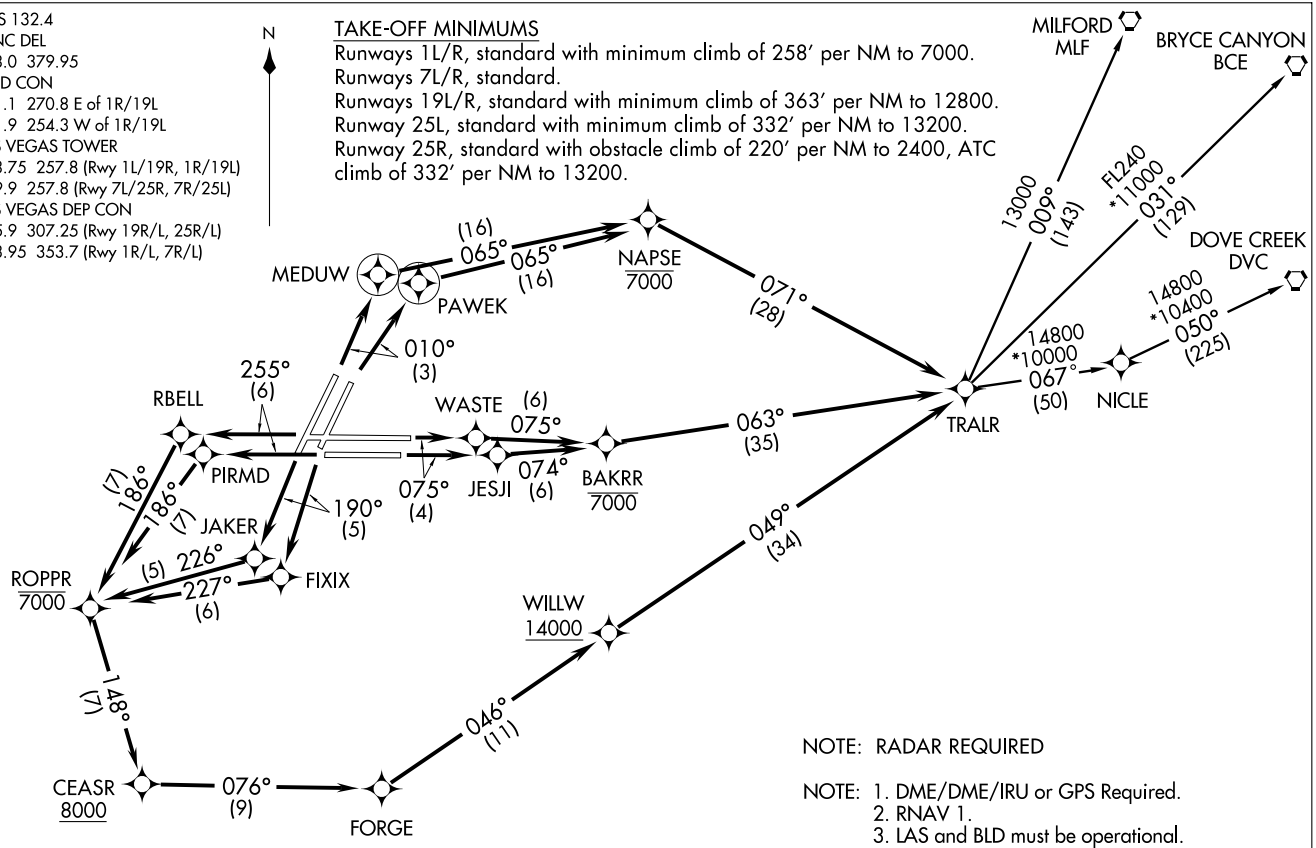
At PRINO execute Rwy 25L ILS approach, if unable proceed direct to LAS VORTAC, then direct BLD VORTAC and hold, maintain 8000'.

TRALR TWO DEPARTURE (RNAV)

ATIS 132.4
CLNC DEL
118.0 379.95
GND CON
121.1 270.8 E of 1R/19L
121.9 254.3 W of 1R/19L
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
LAS VEGAS DEP CON
125.9 307.25 (Rwy 19R/L, 25R/L)
133.95 353.7 (Rwy 1R/L, 7R/L)

N

TAKE-OFF MINIMUMS
Runways 1L/R, standard with minimum climb of 258′ per NM to 7000.
Runways 7L/R, standard.
Runways 19L/R, standard with minimum climb of 363′ per NM to 12800.
Runway 25L, standard with minimum climb of 332′ per NM to 13200.
Runway 25R, standard with obstacle climb of 220′ per NM to 2400, ATC climb of 332′ per NM to 13200.



NOTE: RADAR REQUIRED

NOTE: 1. DME/DME/IRU or GPS Required.
2. RNAV 1.
3. LAS and BLD must be operational.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 1L: Climb via 010° course to MEDUW WP, then via 065° track to cross NAPSE WP at or below 7000, then via 071° track to TRALR WP. Thence. . . .

TAKE-OFF RUNWAY 1R: Climb via 010° course to PAWEK WP, then via 065° track to cross NAPSE WP at or below 7000, then via 071° track to TRALR WP. Thence. . . .

TAKE-OFF RUNWAY 7L: Climb via 075° course to WASTE WP, then via 075° track to cross BAKRR WP at or below 7000, then via 063° track to TRALR WP. Thence. . . .

TAKE-OFF RUNWAY 7R: Climb via 075° course to JESJI WP, then via 074° track to cross BAKRR WP at or below 7000, then via 063° track to TRALR WP. Thence. . . .

TAKE-OFF RUNWAY 19L: Climb via 190° course to FIXIX WP, then via 227° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 076° track to FORGE WP, then via 046° track to cross WILLW WP at or above 14000, then via 049° track to TRALR WP. Thence....

TAKE-OFF RUNWAY 19R: Climb via 190° course to JAKER WP, then via 226° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 076° track to FORGE WP, then via 046° track to cross WILLW WP at or above 14000, then via 049° track to TRALR WP. Thence....

TAKE-OFF RUNWAY 25L: Climb via 255° course to PIRMD WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 076° track to FORGE WP, then via 046° track to cross WILLW WP at or above 14000, then via 049° track to TRALR WP. Thence....

TAKE-OFF RUNWAY 25R: Climb via 255° course to RBELL WP, then via 186° track to cross ROPPR WP at or below 7000, then via 148° track to cross CEASR WP at or above 8000, then via 076° track to FORGE WP, then via 046° track to cross WILLW WP at or above 14000, then via 049° track to TRALR WP. Thence...

....via (Transition) maintain FL190, expect filed altitude 10 minutes after departure.

BRYCE CANYON TRANSITION (TRALR2.BCE)

DOVE CREEK TRANSITION (TRALR2.DVC)

MILFORD TRANSITION (TRALR2.MLF)

TAKE-OFF OBSTACLE NOTES

RWY 1L: Multiple poles, tree, and building 450 feet from departure end of rwy, 283 feet left of centerline, up to 174′ AGL/2132′ MSL.
OL on windsock 248 feet from departure end of rwy, 224 feet right of centerline, 15′ AGL/2104′ MSL.

RWY 1R: Multiple signs and building 1331 feet from departure end of rwy, 448 feet right of centerline, up to 100′ AGL/2120′ MSL.

RWY 7L: Multiple poles and trees 747 feet from departure end of rwy, 442 feet right of centerline, up to 62′ AGL/2062′ MSL.
Tree 1257 feet from departure end of rwy, 789 feet left of centerline, 65′ AGL/2077′ MSL.

RWY 7R: Lighted windsock 126 feet from departure end of rwy, 290 feet right of centerline, 25′ AGL/2051′ MSL.

RWY 19L: Multiple poles, sign, and building 1394 feet from departure end of rwy, 320 feet right of centerline, up to 51′ AGL/2256′ MSL.

RWY 19R: Multiple poles, sign, and building 197 feet from departure end of rwy, 125 feet right of centerline, up to 51′ AGL/2256′ MSL.
Multiple poles and building 1396 feet from departure end of rwy, 356 feet left of centerline, up to 47′ AGL/2262′ MSL.

RWY 25L: Multiple poles, sign, and building 1003 feet from departure end of rwy, 251 feet left of centerline, up to 63′ AGL/2256′ MSL.

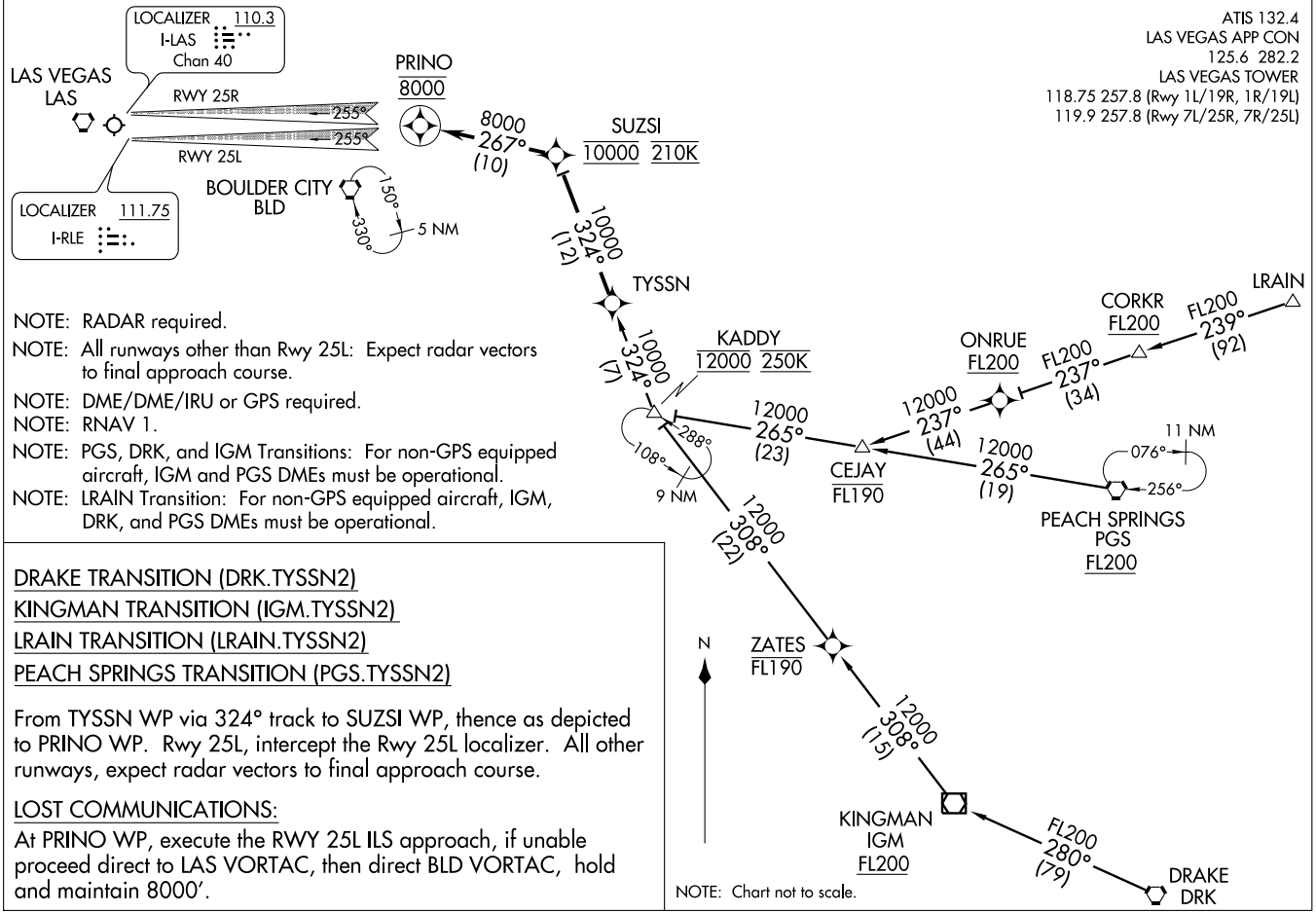
RWY 25R: Multiple poles and road 675 feet from departure end of rwy, 17 feet right of centerline, up to 100′ AGL/2301′ MSL.
Multiple poles and buildings 533 feet from departure end of rwy, 1 foot left of centerline, up to 150′ AGL/2469′ MSL.

SW-4. 14 JAN 2010 to 11 FEB 2010

TYSSN TWO ARRIVAL (RNAV)

(TYSSN.TYSSN2) 09351

ATIS 132.4
LAS VEGAS APP CON
125.6 282.2
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)



NOTE: RADAR required.

NOTE: All runways other than Rwy 25L: Expect radar vectors to final approach course.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: PGS, DRK, and IGM Transitions: For non-GPS equipped aircraft, IGM and PGS DMEs must be operational.

NOTE: LRAIN Transition: For non-GPS equipped aircraft, IGM, DRK, and PGS DMEs must be operational.

DRAKE TRANSITION (DRK.TYSSN2)

KINGMAN TRANSITION (IGM.TYSSN2)

LRAIN TRANSITION (LRAIN.TYSSN2)

PEACH SPRINGS TRANSITION (PGS.TYSSN2)

From TYSSN WP via 324° track to SUZSI WP, thence as depicted to PRINO WP. Rwy 25L, intercept the Rwy 25L localizer. All other runways, expect radar vectors to final approach course.

LOST COMMUNICATIONS:

At PRINO WP, execute the RWY 25L ILS approach, if unable proceed direct to LAS VORTAC, then direct BLD VORTAC, hold and maintain 8000'.

NOTE: Chart not to scale.

ST-662 (FAA)

MC CARRAN INTL
LAS VEGAS, NEVADA

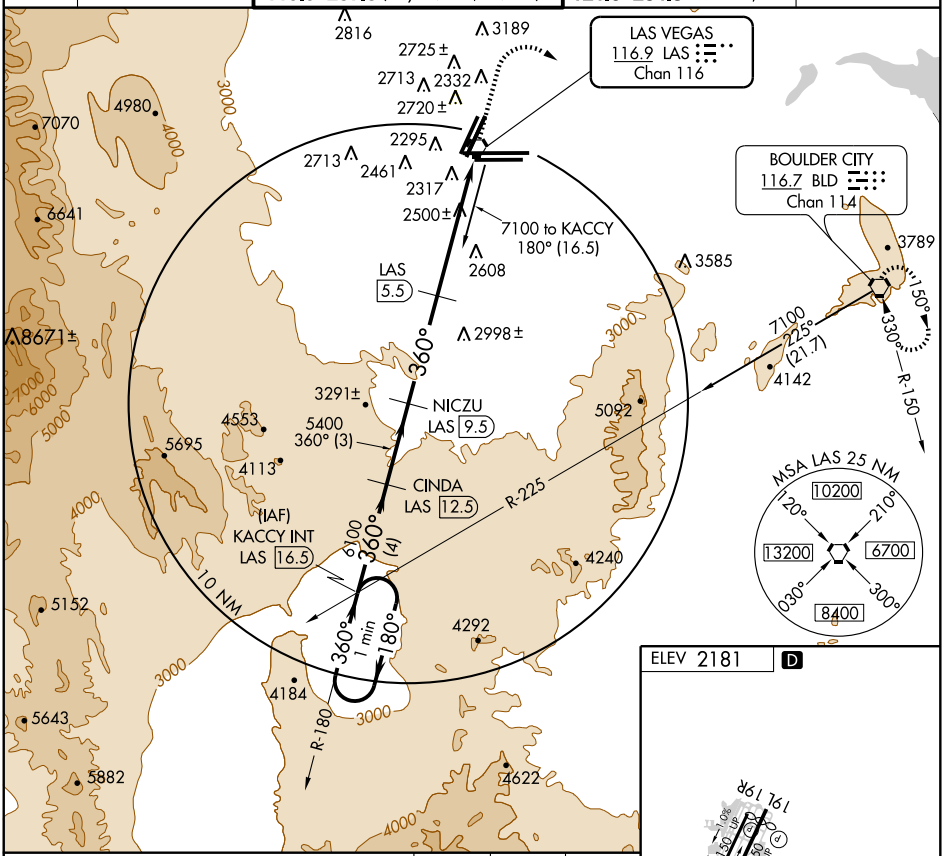
VORTAC LAS	APP CRS	Rwy ldg	N/A
116.9	360°	TDZE	N/A
Chan 116		Apt Elev	2181

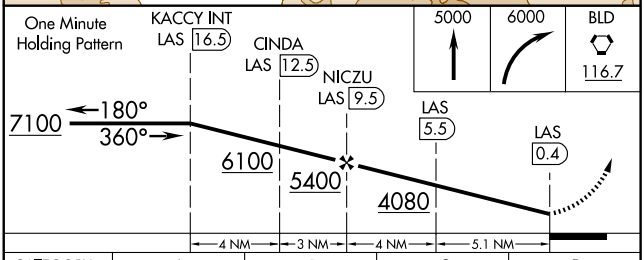
VOR/DME-A

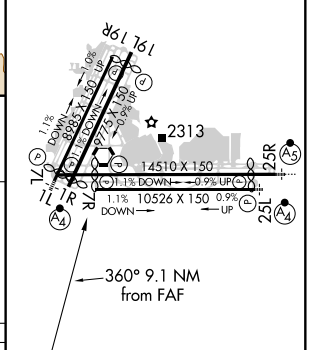
LAS VEGAS/MC CARRAN INTL (LAS)

MISSED APPROACH: Climb to 5000 then climbing right turn to 6000 direct BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95







CATEGORY	A	B	C	D
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3020-2½ 839 (900-2½)	3020-2¾ 839 (900-2¾)

REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

SW-4, 14 JAN 2010 to 11 FEB 2010

VOR RWY 25L/R

LAS VEGAS/MC CARRAN INTL (LAS)

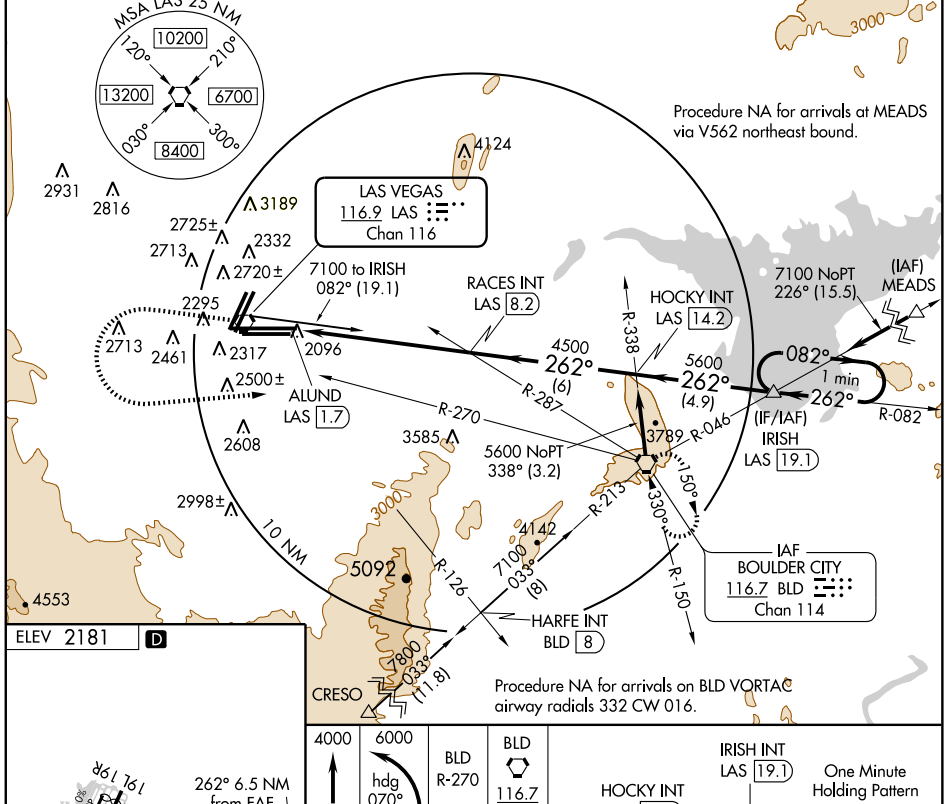
VORTAC LAS	APP CRS	Rwy 25L ldg	10526	Rwy 25R ldg	12755
116.9	262°	TDZE	2069	TDZE	2067
Chan 116		Apt Elev	2181	Apt Elev	2181

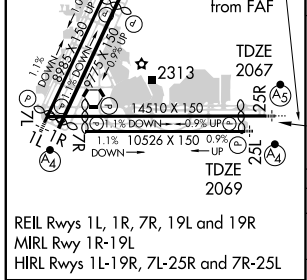
Inoperative table does not apply to MALSR Rwy 25R.
Inoperative table does not apply to MALSF Rwy 25L
Cat. C.

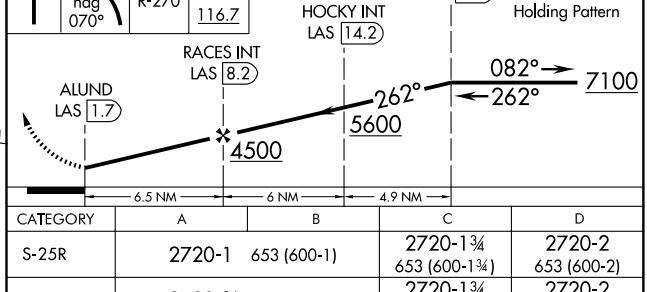
MALSF Rwy 25L (A4) MALSR Rwy 25R (A5)

MISSED APPROACH: Climb to 4000 then climbing left turn to 6000 via heading 070° and BLD R-270 to BLD VORTAC and hold.

ATIS	LAS VEGAS APP CON	LAS VEGAS TOWER	GND CON	CLNC DEL
132.4	125.025 379.15	118.75 257.8 (Rwy 1L/19R, 1R/19L) 119.9 257.8 (Rwy 7L/25R, 7R/25L)	121.1 270.8 E of 1R/19L 121.9 254.3 W of 1R/19L	118.0 379.95





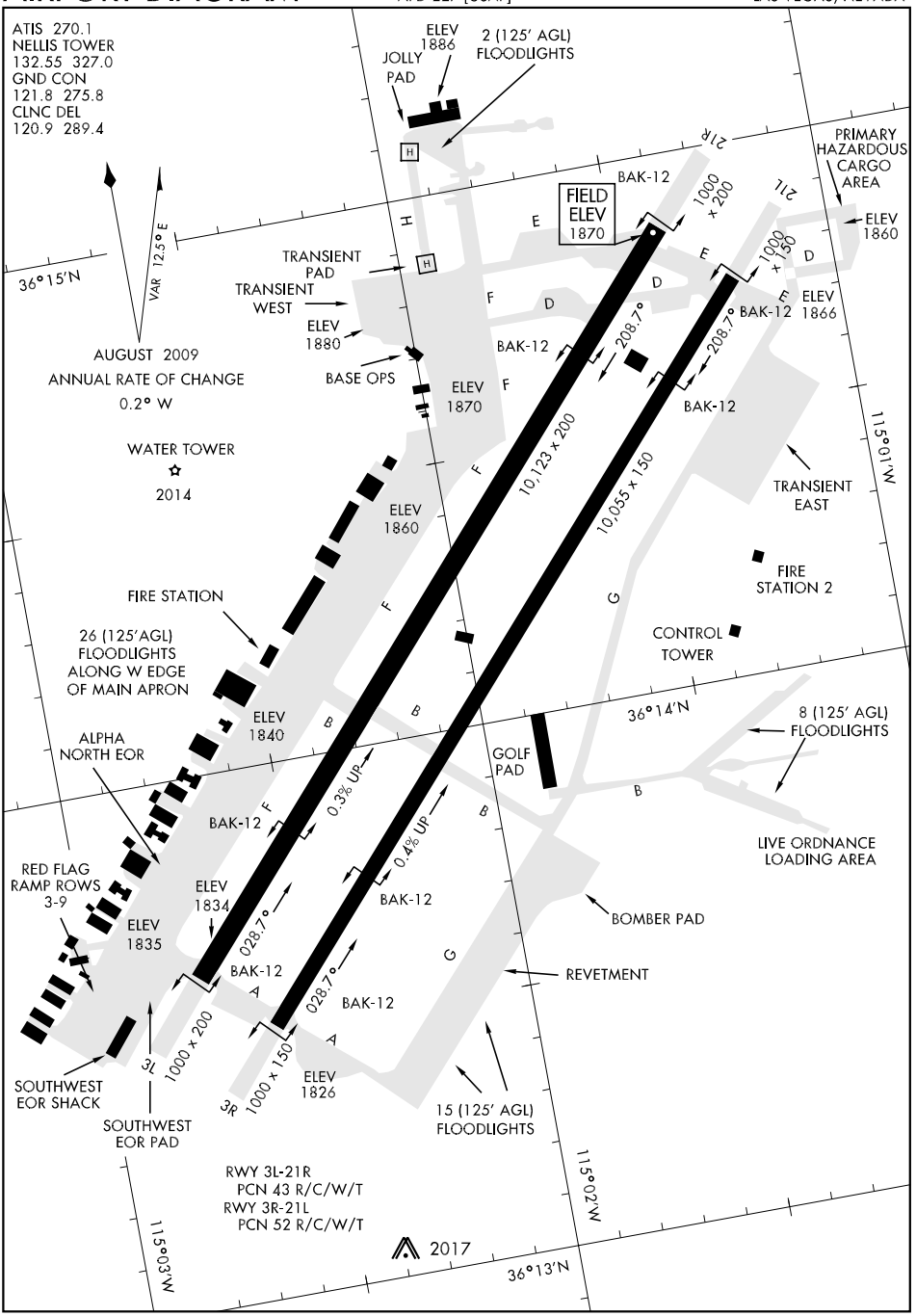


REIL Rwys 1L, 1R, 7R, 19L and 19R
MIRL Rwy 1R-19L
HIRL Rwys 1L-19R, 7L-25R and 7R-25L

FAF to MAP 6.5 NM					
Knots	60	90	120	150	180
Min:Sec	6:30	4:20	3:15	2:36	2:10

CATEGORY	A	B	C	D
S-25R	2720-1 653 (600-1)		2720-1¾ 653 (600-1¾)	2720-2 653 (600-2)
S-25L	2720-¾ 651 (600-¾)		2720-1¾ 651 (600-1¾)	2720-2 651 (600-2)
CIRCLING	3020-1 839 (900-1)	3020-1¼ 839 (900-1¼)	3020-2½ 839 (900-2½)	3040-2¾ 859 (900-2¾)

SW-4, 14 JAN 2010 to 11 FEB 2010


ATIS 270.1
NELLIS TOWER
132.55 327.0
GND CON
121.8 275.8
CLNC DEL
120.9 289.4
ELEV 1886
2 (125' AGL) FLOODLIGHTS
JOLLY PAD
PRIMARY HAZARDOUS CARGO AREA
ELEV 1860
FIELD ELEV 1870
BAK-12
1000 x 200
1000 x 150
ELEV 1866
TRANSIENT PAD
TRANSIENT WEST
ELEV 1880
BASE OPS
ELEV 1870
208.7°
10,123 x 200
10,055 x 150
36°15'N
VAR 12.5° E
AUGUST 2009
ANNUAL RATE OF CHANGE
0.2° W
WATER TOWER
2014
ELEV 1860
TRANSIENT EAST
115°01'W
FIRE STATION 2
FIRE STATION
26 (125'AGL) FLOODLIGHTS ALONG W EDGE OF MAIN APRON
CONTROL TOWER
ELEV 1840
36°14'N
8 (125' AGL) FLOODLIGHTS
ALPHA NORTH EOR
GOLF PAD
0.3% UP
0.4% UP
LIVE ORDNANCE LOADING AREA
RED FLAG RAMP ROWS 3-9
ELEV 1834
ELEV 1835
028.7°
BOMBER PAD
REVETMENT
3L 1000 x 200
3R 1000 x 150
ELEV 1826
SOUTHWEST EOR SHACK
SOUTHWEST EOR PAD
15 (125' AGL) FLOODLIGHTS
RWY 3L-21R
PCN 43 R/C/W/T
RWY 3R-21L
PCN 52 R/C/W/T
2017
115°02'W
115°03'W
36°13'N

DREAM TWO DEPARTURE (DREAM 2 • DREAM)

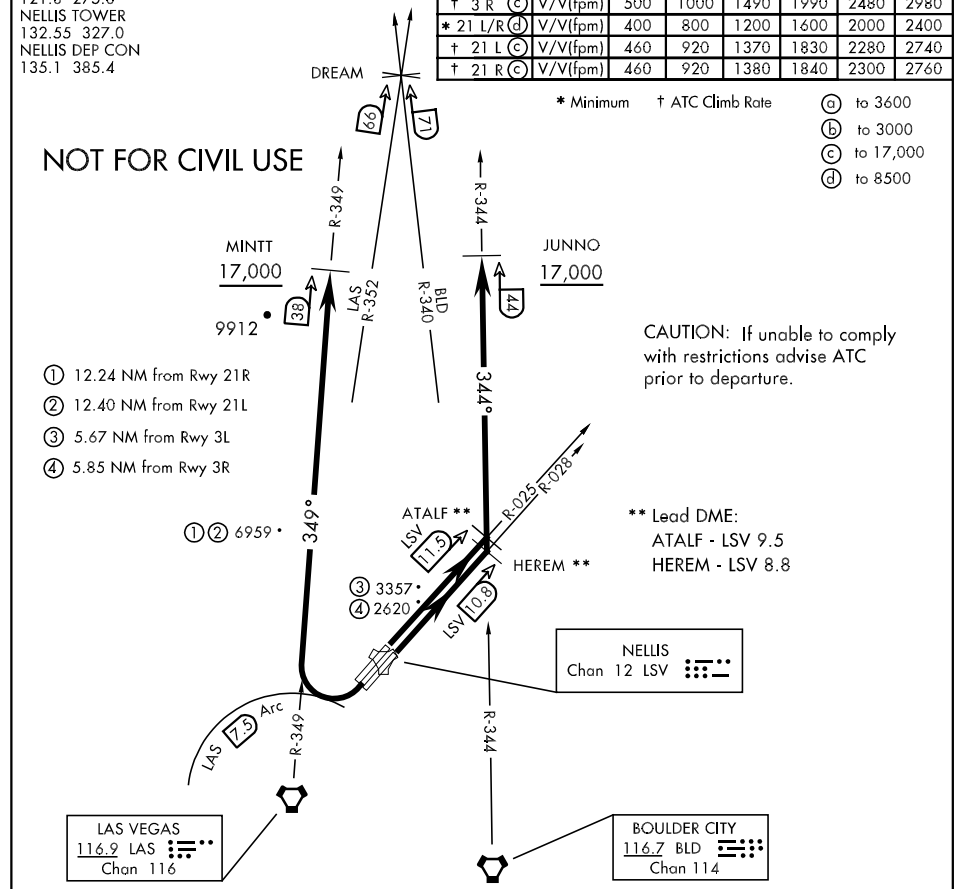
ATIS 270.1
CLNC DEL
120.9 289.4
GND CON
121.8 275.8
NELLIS TOWER
132.55 327.0
NELLIS DEP CON
135.1 385.4

SHL-227 [USAF]

Rwy	Knots	60	120	180	240	300	360
* 3 L (a)	V/V(fpm)	300	600	900	1200	1500	1800
* 3 R (b)	V/V(fpm)	240	480	720	960	1200	1400
† 3 L (c)	V/V(fpm)	500	1000	1500	2000	2490	2990
† 3 R (c)	V/V(fpm)	500	1000	1490	1990	2480	2980
* 21 L/R (d)	V/V(fpm)	400	800	1200	1600	2000	2400
† 21 L (c)	V/V(fpm)	460	920	1370	1830	2280	2740
† 21 R (c)	V/V(fpm)	460	920	1380	1840	2300	2760

* Minimum † ATC Climb Rate

(a) to 3600
(b) to 3000
(c) to 17,000
(d) to 8500



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 3L: Fly runway heading to intercept the LSV TACAN R-025 then direct ATALF, intercept the BLD VORTAC R-344 then direct JUNNO, cross JUNNO at or above 17,000, then via assigned route.

TAKE-OFF RWY 3R: Fly runway heading to intercept the LSV TACAN R-028 then direct HEREM, intercept the BLD VORTAC R-344 then direct JUNNO, cross JUNNO at or above 17,000. Then via assigned route.

TAKE-OFF RWY 21L/R: Turn right to intercept LAS VORTAC R-349 outbound. Remain North of LAS 7.5 DME turning Northbound. Intercept LAS R-349 between 5000 and 6000, do not proceed West of LAS R-349. Cross MINTT at above 17,000, then via assigned route.

NOISE ABATEMENT PROCEDURES: Fly IAW Nellis Noise Abatement instructions published in AP/1.

DREAM TWO DEPARTURE (DREAM 2 • DREAM)
LAS VEGAS, NEVADA

FYTTR ONE DEPARTURE (FYTTR1 • FYTTR)

SHL-227 [USAF]

LAS VEGAS, NEVADA

Rwy	Knots	60	120	180	240	300	360
3 L/R ⓐ	V/V(fpm)	400	800	1200	1600	2000	2400
21L/R ⓑ	V/V(fpm)	390	780	1170	1560	1950	2340

Minimum Climb Rate

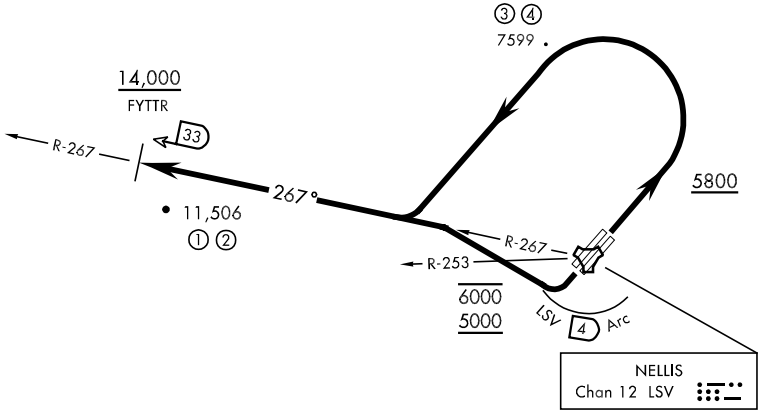
ⓐ to 9600
ⓑ to 13,500

ATIS
270.1
CLNC DEL
120.9 289.4
GND CON
121.8 275.8
NELLIS TOWER
132.55 327.0
NELLIS CONTROL
119.35 254.4
NELLIS DEP CON
135.1 385.4

① 29.81 NM from Rwy 21L
② 29.67 NM from Rwy 21R
③ 15.43 NM from Rwy 3L
④ 15.57 NM from Rwy 3R

RADAR REQUIRED FOR RWY 3L/R DEPARTURES

CAUTION: If unable to comply with restrictions advise ATC prior to departure.



SW-4, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 3L/R: Fly runway heading until reaching 5800, then climbing left turn to intercept LSV TACAN R-267 outbound. Cross FYTTR at or above 14,000 or as assigned, then via assigned route.

TAKE-OFF RWY 21L/R: Turn right to intercept LSV TACAN R-267 outbound, remain within LSV 4 DME until joining LSV R-267, cross LSV R-253 between 5000 and 6000. Cross FYTTR at or above 14,000 or as assigned, then via assigned route.

NOISE ABATEMENT PROCEDURES: Fly IAW Nellis Noise Abatement instructions published in AP/1.

HI-ILS or LOC/DME Z RWY 21L

LOC I-DIQ	APCH CRS	Rwy ldg / TDZE / Arpt Elev
109.1	207°	10,055 / 1866 / 1870

JAL-227 [USAF]

NELLIS AFB (KLSV)

T * When ALS inop, increase CAT CDE RVR to 40, vis to ¾ mile.
** When ALS inop, increase CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.
*** Circling not authorized E of Rwy 3R-21L.

ALSF-1

† MISSED APPROACH: Climb to 15,000, heading 209° to 2.5 DME (ROCKX), then climbing right turn heading 020° to join LSV TACAN R-355 to ARCOE and hold, continue climb-in-hold to 15,000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4

Knots	60	120	180	240	300	360
V/V(fpm) †	470	940	1410	1880	2350	2820

† CAUTION: Missed Approach Minimum climb rate to 13,200 Controlling obstacle 7599'

NOT FOR CIVIL USE

RADAR OR DME REQUIRED

MISSED APPROACH requires ATC Radar monitoring.

Max holding alt FL190 Minimum navaid reception at ARCOE 15,000 MSL.

(IAF) ARCOE LSV 30 — 15,000

RONKY LSV 25 — 15,000

TROPP LSV 21 — 7320

12,500 OLNIE LSV 21 — 5599

LSV 21 Arc

SHEET LSV 13.2

KRYSS LSV 21

ROTSE LSV /RADAR 7.2 — 6999

LOCALIZER 109.1 I-DIQ

JELIR LSV 4.1 — 2322, 2246, 2705, 4754, 3639

ROCKX LSV 2.5 — 3189, 4099

NELLIS Chan 12 LSV

LSV 39

R-355, R-360, R-027, LR-021, 175°, 355°, 207°, 027°, 20 NM, 3000, 9000, 8000

MSA LSV 25 NM: 11,100 / 13,000 / 6700; 190°, 100°, 360°

EMERG SAFE ALT 100 NM 14,000

15,000 hdg 209° — ROCKX LSV 2.5 — ARCOE LSV 30

Non-precision approach. VGSI and descent angle not coincident.

†† Loc Only

TACAN — SESDE .6 — JELIR 4.1 — ROTSE 7.2 /RADAR — SHEET 13.2 Intcp Lczr — KRYSS R-027 21

207° — 4200 — 5000 — 8600

†† 3180 — 4200

GS 3.00° TCH 50

.5 — 3.5 NM — 3.1 NM

ELEV 1870

207° from FAF

1921, 1889, 2116, 1951, 2014, 2017

0.3% DOWN 10,123 x 200

0.4% DOWN 10,055 x 150

TDZE 1866

3L 3R

HIRL all Rwy

CATEGORY	C	D	E
S-ILS 21L *	2066/24 200 (200-½)		
S-LOC 21L **	2440/50 574 (600-1)	2440/60 574 (600-1¼)	2440-1½ 574 (600-1½)
CIRCLING ***	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

HI-TACAN RWY 3R

TACAN LSV Chan 12	APCH CRS 026°	Rwy ldg 10,055 TDZE 1830 Arpt Elev 1870

JAL-227 [USAF]

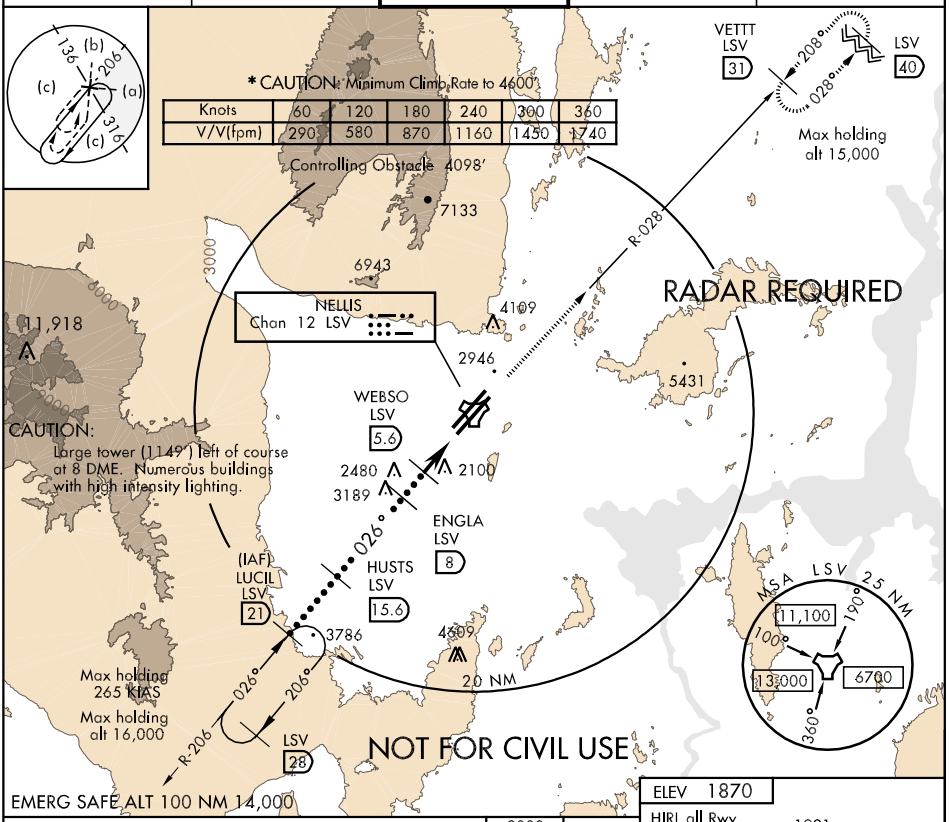
NELLIS AFB (KLSV)

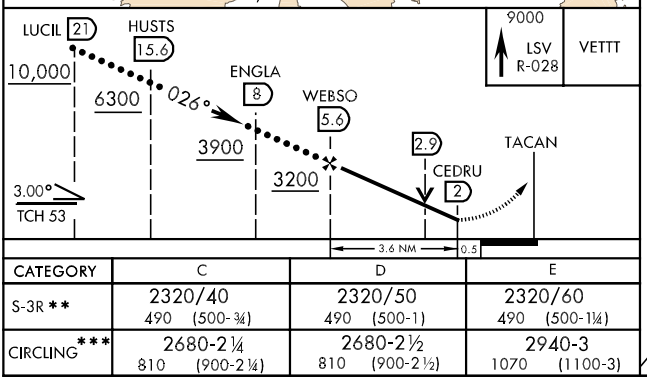
** When ALS inop, increase CAT C RVR to 60, vis to 1¼ miles, CAT D vis to 1½ miles, CAT E vis to 1¾ miles.
*** Circling not authorized E of Rwy 3R-21L.

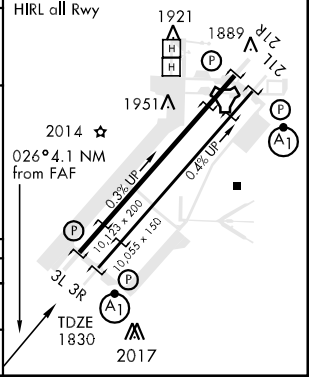
ALSF-1

*MISSED APPROACH: Climb to 9000 on LSV R-028 to VETTT and hold, continue climb in hold to 9000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4







CATEGORY	C	D	E
S-3R **	2320/40 490 (500-¾)	2320/50 490 (500-1)	2320/60 490 (500-1¼)
CIRCLING ***	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

TACAN LSV Chan 12	APCH CRS 207°	Rwy ldg 10,055 TDZE 1866 Arpt Elev 1870

HI-TACAN Y RWY 21L

JAL-227 [USAF] NELLIS AFB (KLSV)

T * When ALS inop, increase CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.

** Circling not authorized E of Rwy 3R-21L.

ALSF-1

† MISSED APPROACH: Climb to 15,000, heading 209° to 2.5 DME (ROCKX), then climbing right turn heading 020° to join LSV TACAN R-355 to ARCOE and hold, continue climb in hold to 15,000..

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4

NOT FOR CIVIL USE

MISSED APPROACH requires ATC Radar monitoring.

Minimum novoid reception at ARCOE 15,000 MSL.

8599 7320 5599 4754 4099 3189 2322 2639 2882 3939 2705 2246 2178 2116

ARCOE LSV 30 — Max holding 310 KIAS — LSV 39 — 175° 355°

R-355 R-353 LR-018 R-027 R-280

HOKUM LSV 13 — 8800

(IAF) DUDBE LSV 17 — 100° — LSV 13 Arc

JENAR LSV 7 — 207° — HULPU LSV 13

15,000 10,000 (LEAD DME) LSV 15

JOGEV LSV 3.5

ROCKX LSV 2.5

NELLIS Chan 12 LSV

† CAUTION: Missed Approach climb rate to 10,300

Knots	60	120	180	240	300	360
V/V(fpm)	450	900	1350	1800	2250	2700

Controlling Obstacle 7599'

EMERG SAFE ALT 100 NM 14,000

20 NM

MSA LSV 25 NM — 11,100 — 190° — 100° — 13,000 — 6700 — 360°

VGSI and descent angle not coincident.

15,000 hdg 209° — ROCKX LSV 2.5 — ARCOE LSV 30

TACAN — KITCH 7 — JOGEV 3.5 — JENAR 7 — 207° — HULPU 13 — 5300 — 4500 — 3180 — 3.54° — TCH 54

.5 NM — 2.8 NM — 3.5 NM

ELEV 1870 — 207° to TACAN

1921 — 1889 — 21R — 21L — TDZE 1866 — 1951 — 2014 — 0.3% DOWN — 0.4% DOWN — 10,123 × 200 — 10,055 × 150 — 3L 3R — 2017

HIRL all Rwy

CATEGORY	C	D	E
S-21L *	2480/60 614 (700-1¼)	2480-1½ 614 (700-1½)	2480-1¾ 614 (700-1¾)
CIRCLING **	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

HI-TACAN Z RWY 21L

TACAN LSV Chan 12	APCH CRS 207°	Rwy ldg 10,055 TDZE 1866 Arpt Elev 1870

JAL-227 [USAF]

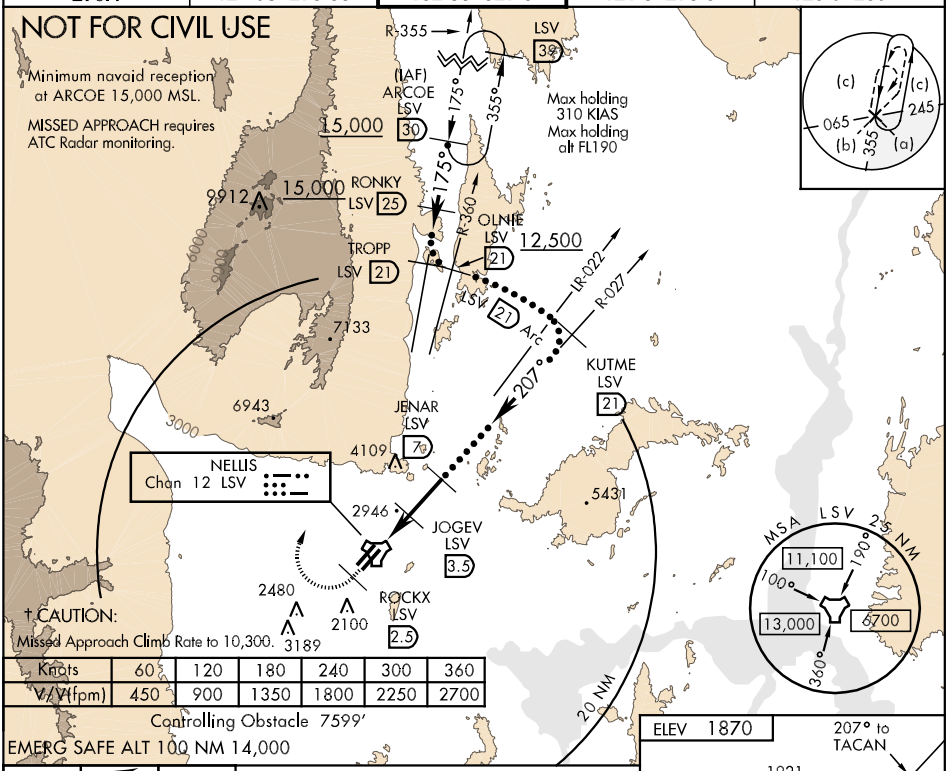
NELLIS AFB (KLSV)

T * When ALS inop, increase CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.
** Circling not authorized E of Rwy 3R-21L.

ALSF-1

† MISSED APPROACH: Climb to 15,000, heading 209° to 2.5 DME (ROCKX), then climbing right turn heading 020° to join LSV TACAN R-355 to ARCOE and hold, continue climb in hold to 15,000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4

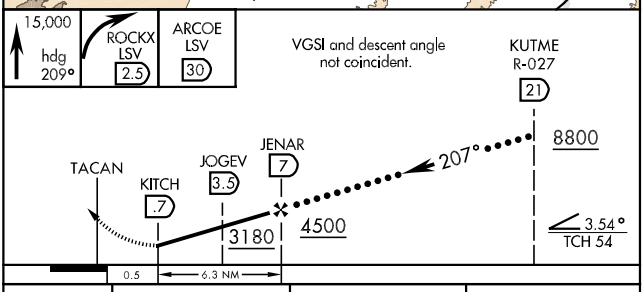


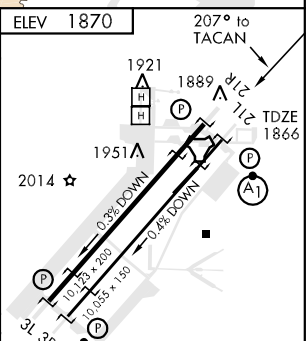
† CAUTION:
Missed Approach Climb Rate to 10,300.

Knots	60	120	180	240	300	360
V/V(fpm)	450	900	1350	1800	2250	2700

Controlling Obstacle 7599'

EMERG SAFE ALT 100 NM 14,000





CATEGORY	C	D	E
S-21L *	2480/60 614 (700-1¼)	2480-1½ 614 (700-1½)	2480-1¾ 614 (700-1¾)
CIRCLING **	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

HIRL all Rwy

ILS or LOC/DME Z RWY 21L

LOC I-DIQ	APCH CRS	Rwy ldg / TDZE / Arpt Elev
109.1	207°	10,055 / 1866 / 1870

AL-227 [USAF]

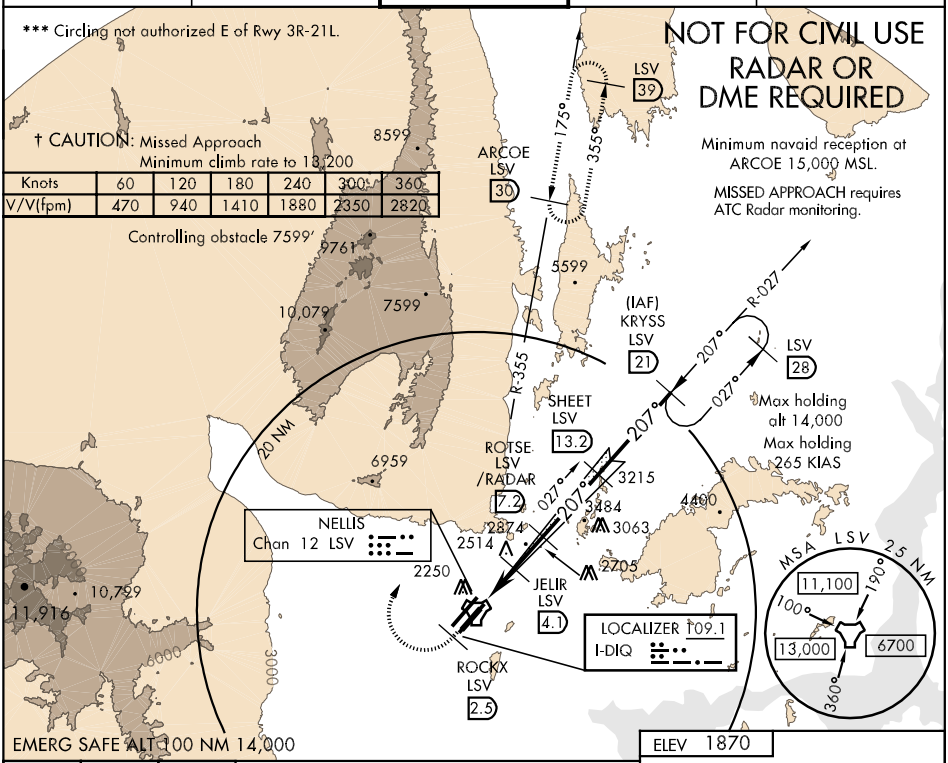
NELLIS AFB (KLSV)

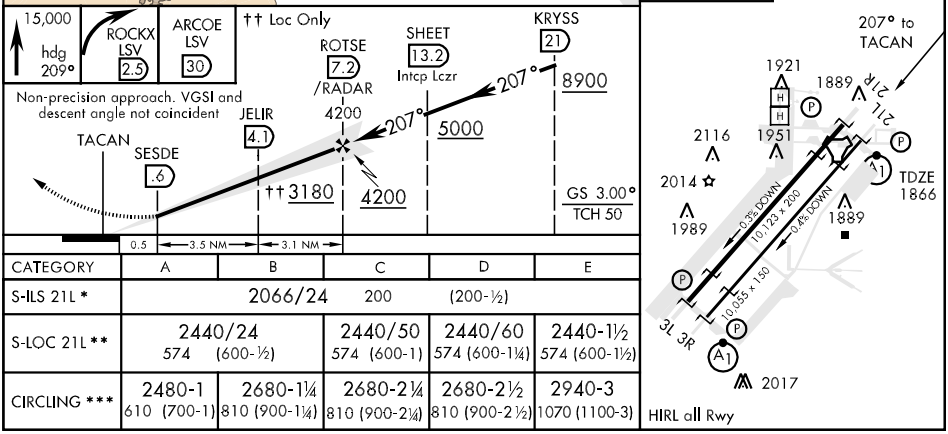
▼ * When ALS inop, increase CAT ABCDE RVR to 40, vis to ¾ mile.
** When ALS inop, increase CAT AB RVR to 50, vis to 1 mile, CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.

ALSF-1 (A1)

† MISSED APPROACH: Climb to 15,000, heading 209° to 2.5 DME (ROCKX), then climbing right turn heading 020° to join LSV TACAN R-355 to ARCOE and hold, continue climb in hold to 15,000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4





CATEGORY	A	B	C	D	E
S-ILS 21L *	2066/24 200 (200-½)				
S-LOC 21L **	2440/24 574 (600-½)		2440/50 574 (600-1)	2440/60 574 (600-1¼)	2440-1½ 574 (600-1½)
CIRCLING ***	2480-1 610 (700-1)	2680-1¼ 810 (900-1¼)	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

SW-4, 14 JAN 2010 to 11 FEB 2010

LOC I-DIQ	APCH CRS	Rwy ldg / TDZE / Arpt Elev
109.1	207°	10,055 / 1866 / 1870

AL-227 [USAF]

LOC/DME Y RWY 21L

NELLIS AFB (KLSV)

* When ALS inop, increase CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.

** Circling not authorized E of Rwy 3R-21L.

ALSF-1

† MISSED APPROACH: Climb to 8000, track 206° to intercept the LAS VORTAC R-018 to LAS and hold, continue climb in hold to 8000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4

† CAUTION: Missed Approach Minimum Climb Rate to 8000

Knots	60	120	180	240	300	360
V/V(fpm)	450	950	1350	1800	2250	2700

ATC Minimum Climb Rate

LAS VEGAS VORTAC DME not usable for missed approach holding.

FOR USE BY NELLIS AFB ASSIGNED AIRCRAFT ONLY

8599 R-348 LR-352 (IAF) ACOSU BLD 34.4 154° 207° BALBE LAS 24 CARUB LAS 17.4 LATPE LAS 15.3 2928 2705 2813 2322 2246 2116 4124 3588 3189 8671 3582 3647 3510 4609 20 NM 6000 3000 LOCALIZER 109.1 I-DIQ 018° 198° R-018 LAS VEGAS 116.9 LAS Chan 116 BOULDER CITY 116.7 BLD Chan 114 MSA LAS 25 NM 10,600 120° 210° 6600 13,000 300° 030° 8800

EMERG SAFE ALT 100 NM 14,000

8000 tr 206° | LAS R-018 | LAS

VGSI and descent angle not coincident.

LAS VORTAC, ENIYO LAS 12.4, LATPE LAS 15.3, CARUB LAS 17.4, BALBE LAS 24, BLD LR-352, ACOSU BLD R-348 34.4

3160 4000 6100 7000 207° 154° 3.55° TCH 54 .6 5.0 NM

ELEV 1870 207° from FAF 1921 1889 21R 21L TDZE 1866 1951 2014 0.3% DOWN 10,123 × 200 0.4% DOWN 10,055 × 150 3L 3R 2017

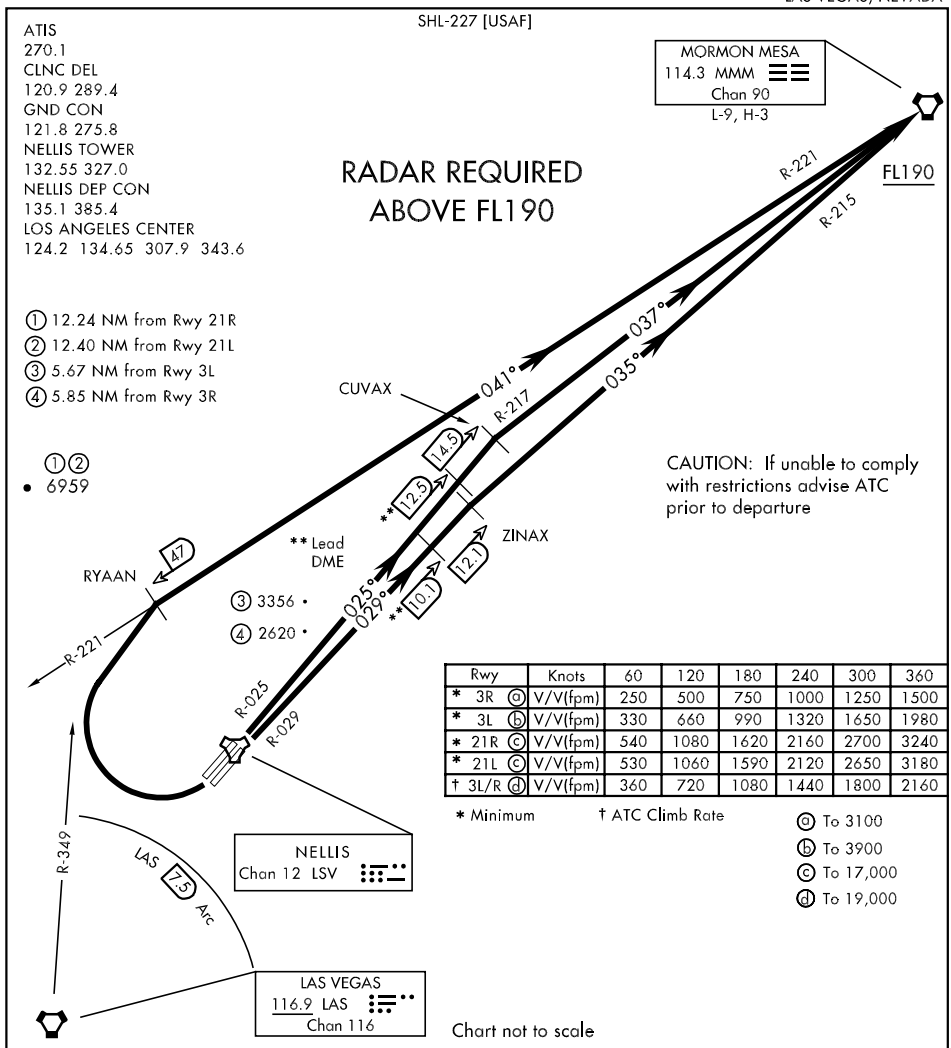
HIRL all Rwy

CATEGORY	C	D	E
S-LOC 21L *	2420/50 554 (600-1)	2420/60 554 (600-1¼)	2420-1½ 554 (600-1½)
CIRCLING **	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070 (1100-3)

SHL-227 [USAF]

ATIS
270.1
CLNC DEL
120.9 289.4
GND CON
121.8 275.8
NELLIS TOWER
132.55 327.0
NELLIS DEP CON
135.1 385.4
LOS ANGELES CENTER
124.2 134.65 307.9 343.6

① 12.24 NM from Rwy 21R
② 12.40 NM from Rwy 21L
③ 5.67 NM from Rwy 3L
④ 5.85 NM from Rwy 3R



Rwy	Knots	60	120	180	240	300	360
* 3R ⓐ	V/V(fpm)	250	500	750	1000	1250	1500
* 3L ⓑ	V/V(fpm)	330	660	990	1320	1650	1980
* 21R ⓒ	V/V(fpm)	540	1080	1620	2160	2700	3240
* 21L ⓒ	V/V(fpm)	530	1060	1590	2120	2650	3180
† 3L/R ⓓ	V/V(fpm)	360	720	1080	1440	1800	2160

* Minimum † ATC Climb Rate

ⓐ To 3100
ⓑ To 3900
ⓒ To 17,000
ⓓ To 19,000

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 3L: Fly runway heading to intercept LSV TACAN R-025 then direct CUVAX, intercept the MMM VORTAC R-217 then direct MMM climbing to FL190 or as assigned, then via assigned route.

TAKE-OFF RWY 3R: Fly runway heading to intercept LSV TACAN R-029 then direct ZINAX, intercept the MMM VORTAC R-215 then direct MMM climbing to FL190 or as assigned, then via assigned route.

TAKE-OFF RWY 21L/R: Turn right to intercept MMM VORTAC R-221 prior to MMM 47 DME, remain North of the LAS VORTAC 7.5 DME, remain East of LAS R-349, intercept MMM R-221 then direct MMM, cross MMM at or above FL190 then via assigned route.

NOISE ABATEMENT PROCEDURES: Fly IAW Nellis Noise Abatement instructions published in AP/1.

MORMON MESA TWO DEPARTURE (MMM 2 • MMM)
LAS VEGAS, NEVADA

TACAN RWY 21L

TACAN LSV Chan 12	APCH CRS 207°	Rwy ldg 10,055 TDZE 1866 Arpt Elev 1870

AL-227 [USAF]

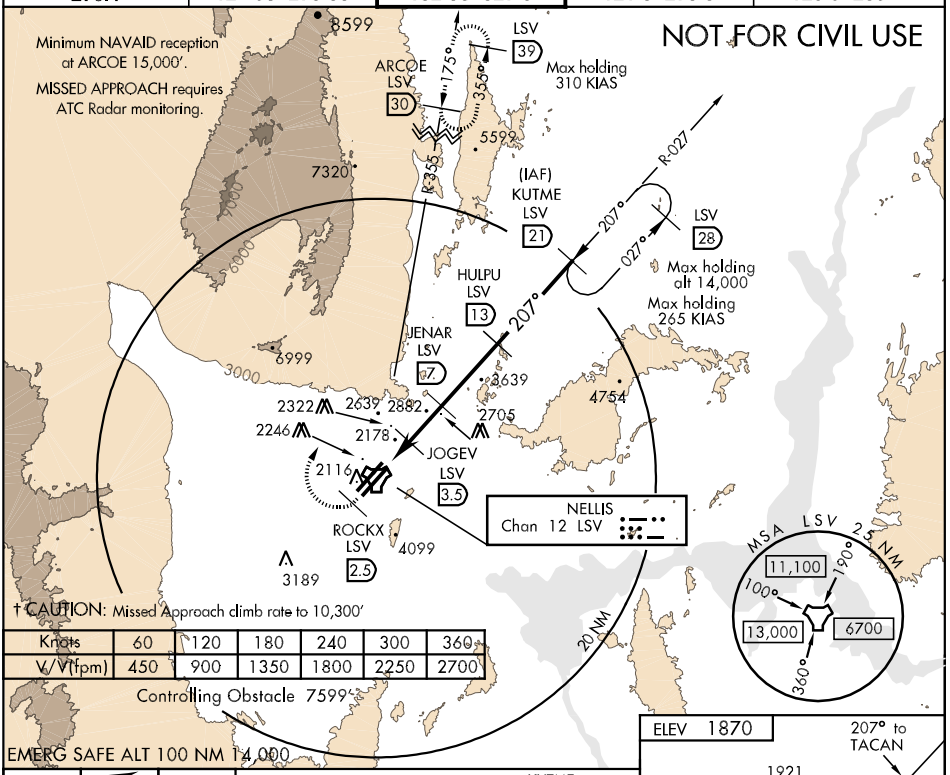
NELLIS AFB (KLSV)

▼ * When ALS inop, increase CAT AB RVR to 50, vis to 1 mile, CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.
** Circling not authorized E of Rwy 3R-21L.

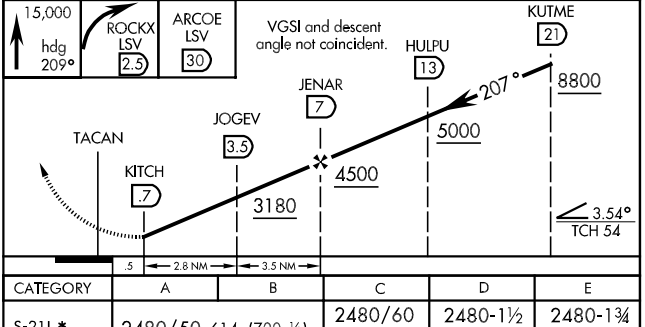
ALSF-1

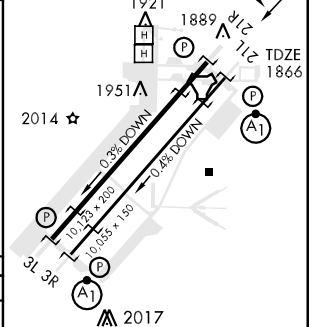
† MISSED APPROACH: Climb to 15,000, heading 209° to 2.5 DME (ROCKX), then climbing right turn heading 020° to join LSV TACAN R-355 to ARCOE and hold, continue climb in hold to 15,000.

ATIS	NELLIS APP CON	NELLIS TOWER	GND CON	CLNC DEL
270.1	124.95 273.55	132.55 327.0	121.8 275.8	120.9 289.4



Knots	60	120	180	240	300	360
V/V(fpm)	450	900	1350	1800	2250	2700



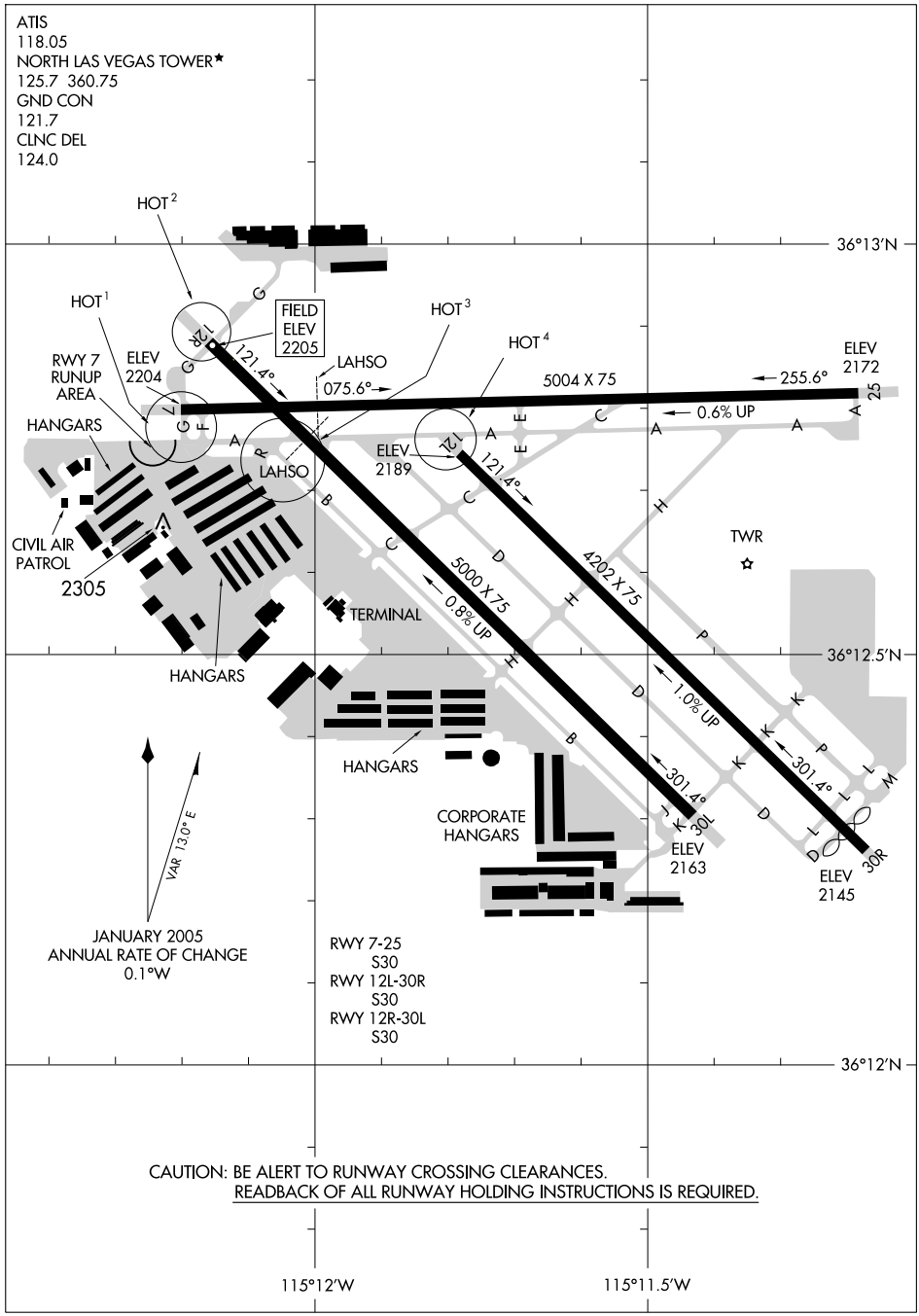


CATEGORY	A	B	C	D	E
S-21L *	2480/50 614 (700-½)		2480/60 614 (700-1¼)	2480-1½ 614 (700-1½)	2480-1¾ 614 (700-1¾)
CIRCLING **	2480-1 610 (700-1)	2680-1¼ 810 (900-1¼)	2680-2¼ 810 (900-2¼)	2680-2½ 810 (900-2½)	2940-3 1070(1100-3)

AIRPORT DIAGRAM

AL-6970 (FAA)

LAS VEGAS/ NORTH LAS VEGAS (VGT)
LAS VEGAS, NEVADA



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

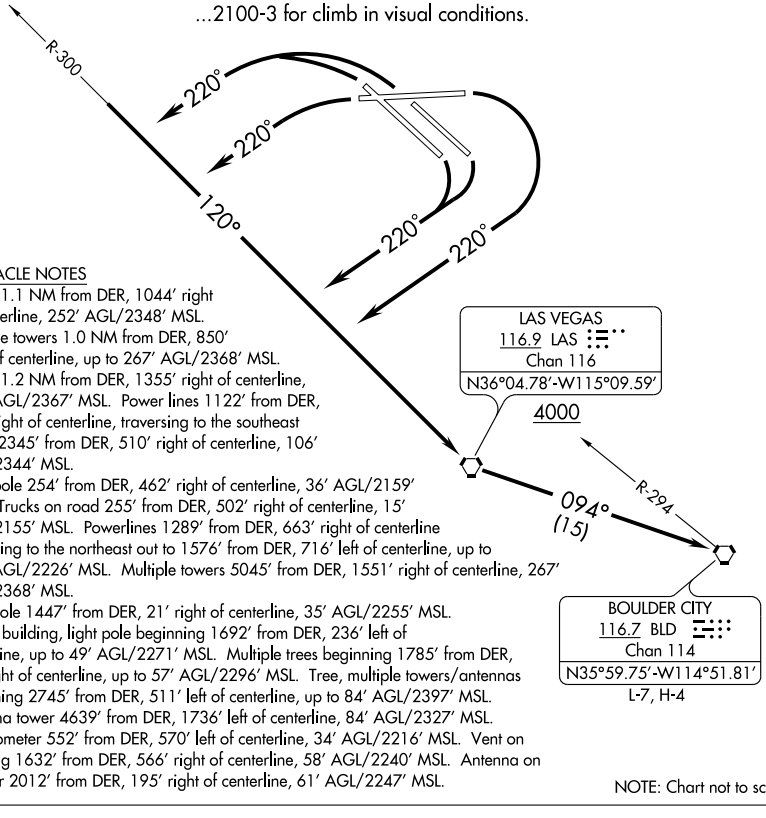
BOULDER CITY ONE DEPARTURE (OBSTACLE)

ATIS 118.05
GND CON 121.7
UNICOM 122.95
CTAF 125.7

TAKE-OFF MINIMUMS

Rwy 7: Standard with minimum climb of 339′ per NM to 3600 or...
Rwy 12L: Standard with minimum climb of 393′ per NM to 3600 or...
Rwy 12R: Standard with minimum climb of 373′ per NM to 3600 or...
Rwy 25: Standard with minimum climb of 257′ per NM to 4500 or...
Rwy 30R: Standard with minimum climb of 354′ per NM to 4700 or...
Rwy 30L: Standard with minimum climb of 367′ per NM to 4700 or...

...2100-3 for climb in visual conditions.



TAKE-OFF OBSTACLE NOTES

Rwy 7: Tower 1.1 NM from DER, 1044′ right of centerline, 252′ AGL/2348′ MSL.

Rwy 12R: Multiple towers 1.0 NM from DER, 850′ right of centerline, up to 267′ AGL/2368′ MSL. Tower 1.2 NM from DER, 1355′ right of centerline, 270′ AGL/2367′ MSL. Power lines 1122′ from DER, 764′ right of centerline, traversing to the southeast out to 2345′ from DER, 510′ right of centerline, 106′ AGL/2344′ MSL.

Rwy 12L: Light pole 254′ from DER, 462′ right of centerline, 36′ AGL/2159′ MSL. Trucks on road 255′ from DER, 502′ right of centerline, 15′ AGL/2155′ MSL. Powerlines 1289′ from DER, 663′ right of centerline traversing to the northeast out to 1576′ from DER, 716′ left of centerline, up to 129′ AGL/2226′ MSL. Multiple towers 5045′ from DER, 1551′ right of centerline, 267′ AGL/2368′ MSL.

Rwy 25: Light pole 1447′ from DER, 21′ right of centerline, 35′ AGL/2255′ MSL.

Rwy 30L: Signs, building, light pole beginning 1692′ from DER, 236′ left of centerline, up to 49′ AGL/2271′ MSL. Multiple trees beginning 1785′ from DER, 78′ right of centerline, up to 57′ AGL/2296′ MSL. Tree, multiple towers/antennas beginning 2745′ from DER, 511′ left of centerline, up to 84′ AGL/2397′ MSL.

Rwy 30R: Antenna tower 4639′ from DER, 1736′ left of centerline, 84′ AGL/2327′ MSL. Anemometer 552′ from DER, 570′ left of centerline, 34′ AGL/2216′ MSL. Vent on building 1632′ from DER, 566′ right of centerline, 58′ AGL/2240′ MSL. Antenna on hangar 2012′ from DER, 195′ right of centerline, 61′ AGL/2247′ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 7, 12 L/R: Turn right.
TAKE-OFF RUNWAYS 25, 30L/R: Turn left.

All aircraft climb to 6000 via heading 220° and LAS-300 to LAS VORTAC, cross LAS VORTAC at or above 4000. Continue climb via LAS VORTAC R-094 to BLD VORTAC.

RUNWAYS 7, 12L/R, 25, 30L/R: For climb in visual conditions: cross North Las Vegas Airport at or above 4200 then via BLD VORTAC R-294 to BLD VORTAC.

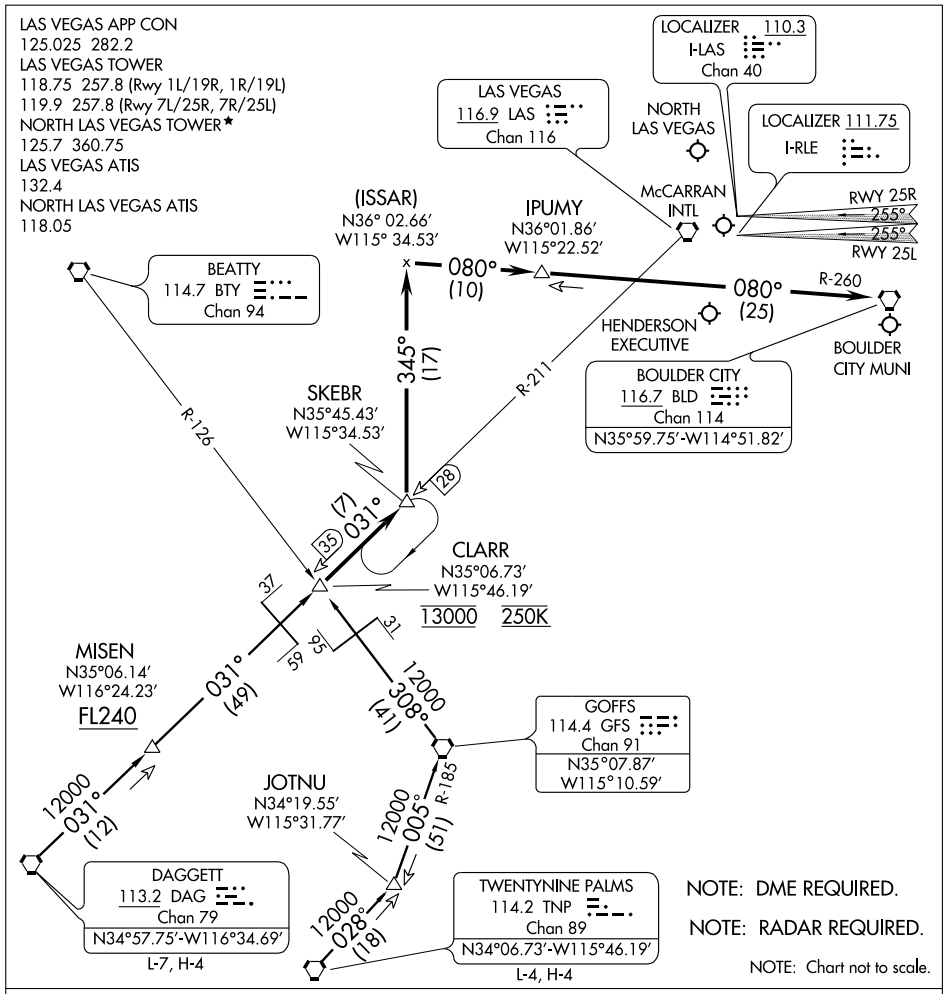
SW-4, 14 JAN 2010 to 11 FEB 2010

(CLARR.CLARR2) 09351

CLARR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



DAGGETT TRANSITION (DAG.CLARR2): From over DAG VORTAC via DAG R-031 and LAS R-211 to CLARR INT. Thence. . . .

TWENTYNINE PALMS TRANSITION (TNP.CLARR2): From over TNP VORTAC via TNP R-028 to JOTNU INT, then via GFS R-185 to GFS VORTAC, then via GFS R-308 and BTY R-126 to CLARR INT. Thence. . . .

....From over CLARR INT via LAS R-211 to SKEBR INT. Thence. . . .

LANDING MC CARRAN INTL: Via heading 345° to intercept the BLD R-260 to BLD VORTAC. Rwys 1L/R, 7L/R, and 19L/R expect radar vectors for visual approach prior to BLD VORTAC. Rwys 25L/R expect ILS approach procedure.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: After SKEBR INT expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

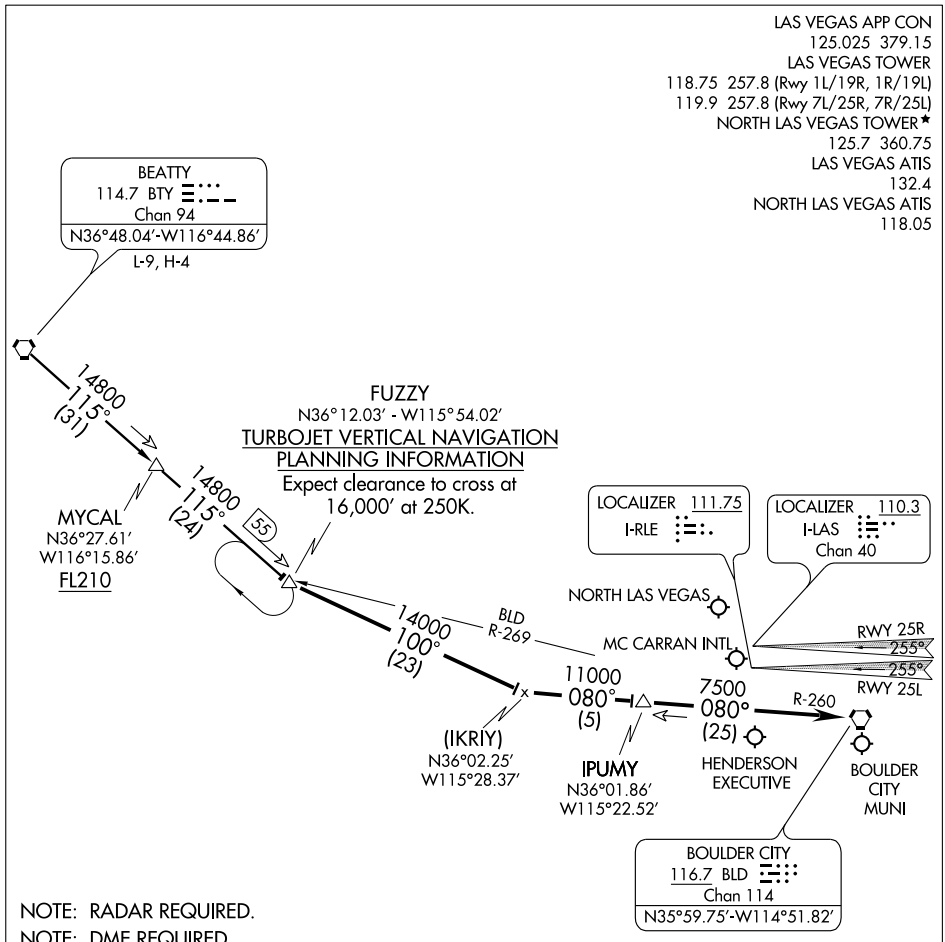
(FUZZY.FUZZY7) 09351

FUZZY SEVEN ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA

LAS VEGAS APP CON
125.025 379.15
LAS VEGAS TOWER
118.75 257.8 (Rwy 1L/19R, 1R/19L)
119.9 257.8 (Rwy 7L/25R, 7R/25L)
NORTH LAS VEGAS TOWER★
125.7 360.75
LAS VEGAS ATIS
132.4
NORTH LAS VEGAS ATIS
118.05



NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: Chart not to scale.

BEATTY TRANSITION (BTY.FUZZY7): From over BTY VORTAC via BTY R-115 to FUZZY INT. Thence . . .

. . . From over FUZZY via heading 100° to intercept BLD R-260 to BLD VORTAC.

LANDING MC CARRAN INTL RWYS 1L/R, 7L/R, and 19L/R: Expect vectors for visual approach prior to BLD VORTAC.

LANDING MC CARRAN INTL RWYS 25L/R: Expect ILS approach.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI : After IPUMY, expect radar vectors to airport.

SW-4, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5000
135°	TDZE	2205
	Apt Elev	2205

GPS RWY 12R

LAS VEGAS/ NORTH LAS VEGAS (VGT)

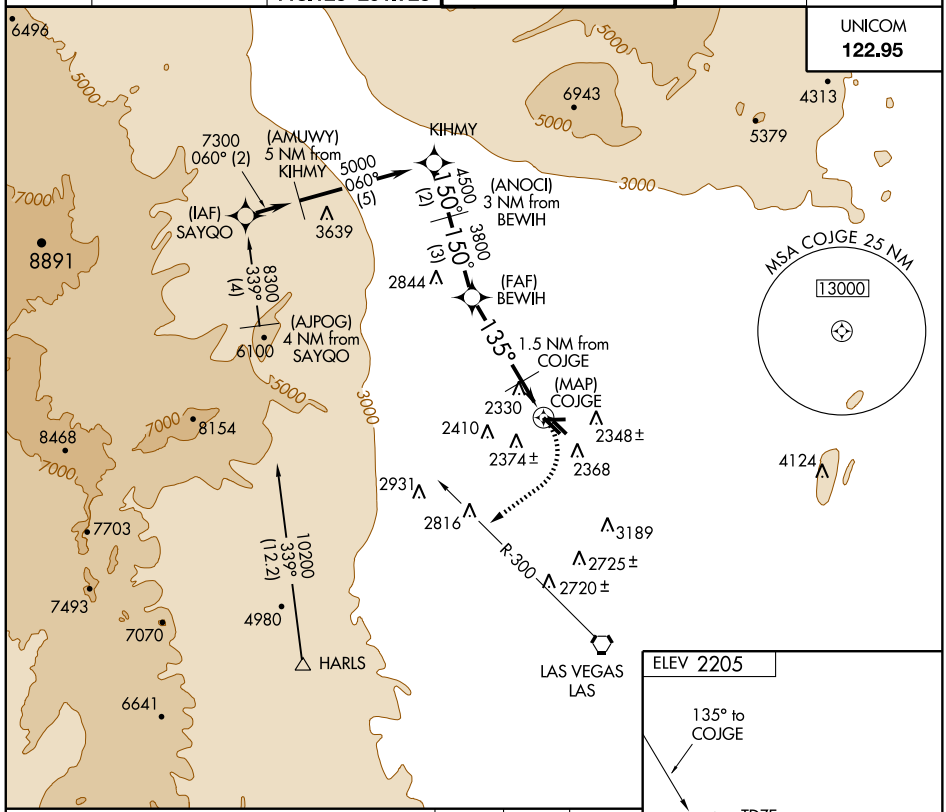
T NA

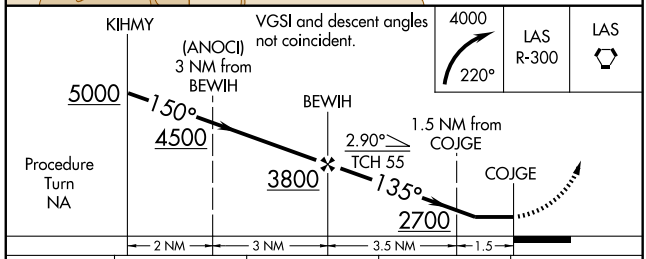
When local altimeter setting not received, use McCarran Intl altimeter setting and increase all MDA 40 feet and S-12R Cat D visibility ¼ mile. Circling to Rwy 12L-30R not authorized.

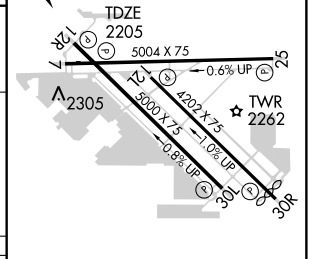
MISSED APPROACH: Climbing right turn to 4000 via heading 220° and LAS R-300 to LAS VORTAC.

ATIS	LAS VEGAS APP CON	NELLIS APP CON	NORTH LAS VEGAS TOWER ★	GND CON	CLNC DEL
118.05	Rwy 30 119.4 282.2	Rwy 12 118.125 291.725	125.7 (CTAF) L 360.75	121.7	124.0

UNICOM 122.95







CATEGORY	A	B	C	D
S-12R	2620-1 415 (500-1)		2620-1¼ 415 (500-1¼)	
CIRCLING	2680-1 475 (500-1)		2680-1½ 475 (500-1½)	2760-2 555 (600-2)

MIRL Rwys 7-25, 12R-30L and 12L-30R L

SW-4, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5000
285°	TDZE	2191
	Apt Elev	2205

GPS RWY 30L

LAS VEGAS/ NORTH LAS VEGAS (VGT)

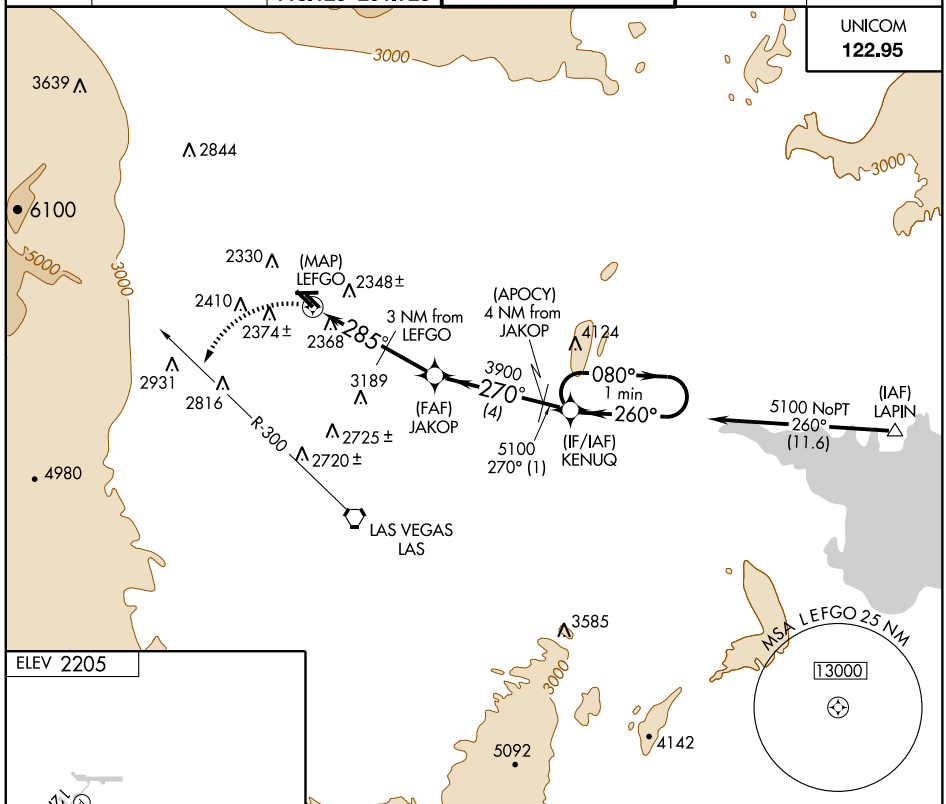
NA

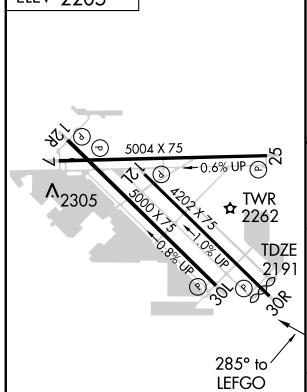
When local altimeter setting not received, use McCarron Intl altimeter setting and increase all MDA 40 feet and S-30L Cats C/D visibility ¼ mile. Circling to Rwy 12L-30R not authorized.

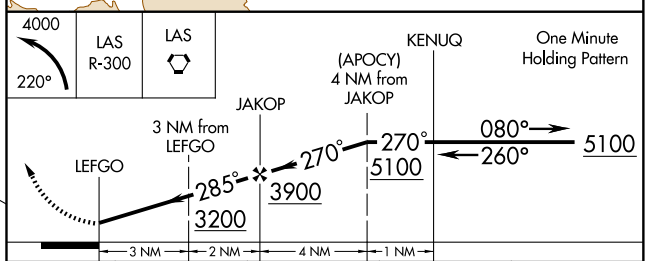
MISSED APPROACH: Climbing left turn to 4000 via heading 220° and LAS R-300 to LAS VORTAC.

ATIS	LAS VEGAS APP CON	NELLIS APP CON	NORTH LAS VEGAS TOWER★	GND CON	CLNC DEL
118.05	Rwy 30 119.4 282.2	Rwy 12 118.125 291.725	125.7 (CTAF) 360.75	121.7	124.0

UNICOM 122.95







CATEGORY	A	B	C	D
S-30L	2680-1 489 (500-1)		2680-1¼ 489 (500-1¼)	2680-1½ 489 (500-1½)
CIRCLING	2720-1 515 (600-1)		2720-1½ 515 (600-1½)	2760-2 555 (600-2)

MIRL Rwys 7-25, 12R-30L and 12L-30R

LOC/DME I-HWG	APP CRS	Rwy ldg	4202
110.7	120°	TDZE	2189
Chan 44		Apt Elev	2205

ILS or LOC RWY 12L

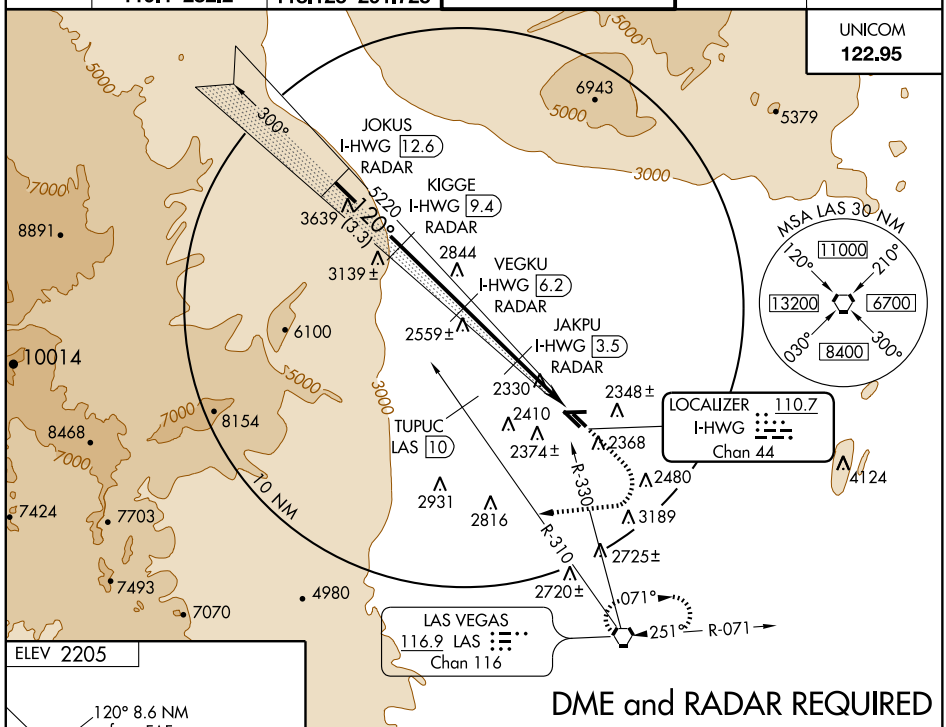
LAS VEGAS/NORTH LAS VEGAS (VGT)

When local altimeter setting not received, use McCarran Intl altimeter setting and increase DA to 2478, and visibility Cats A/B ¼ mile; increase all MDA 40 feet.
DME and RADAR required.

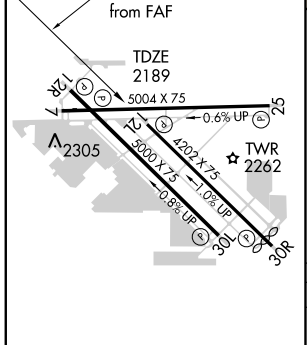
MISSED APPROACH: Climb to 2600, then climbing right turn heading 250° to 6000, intercept LAS R-310 outbound to TUPUC/LAS 10 DME then turn right via LAS R-330 inbound to LAS VORTAC and hold.

ATIS	LAS VEGAS APP CON	NELLIS APP CON	NORTH LAS VEGAS TOWER*	GND CON	CLNC DEL
118.05	Rwy 30 119.4 282.2	Rwy 12 118.125 291.725	125.7 (CTAF) 360.75	121.7	124.0

UNICOM 122.95

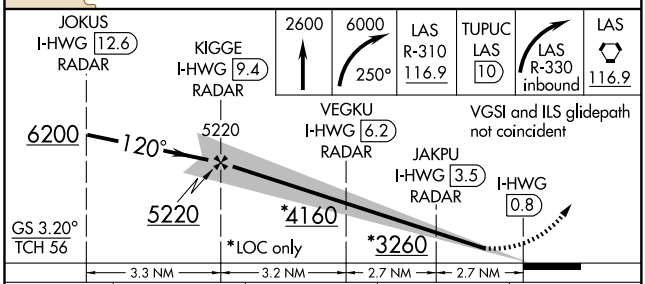


DME and RADAR REQUIRED



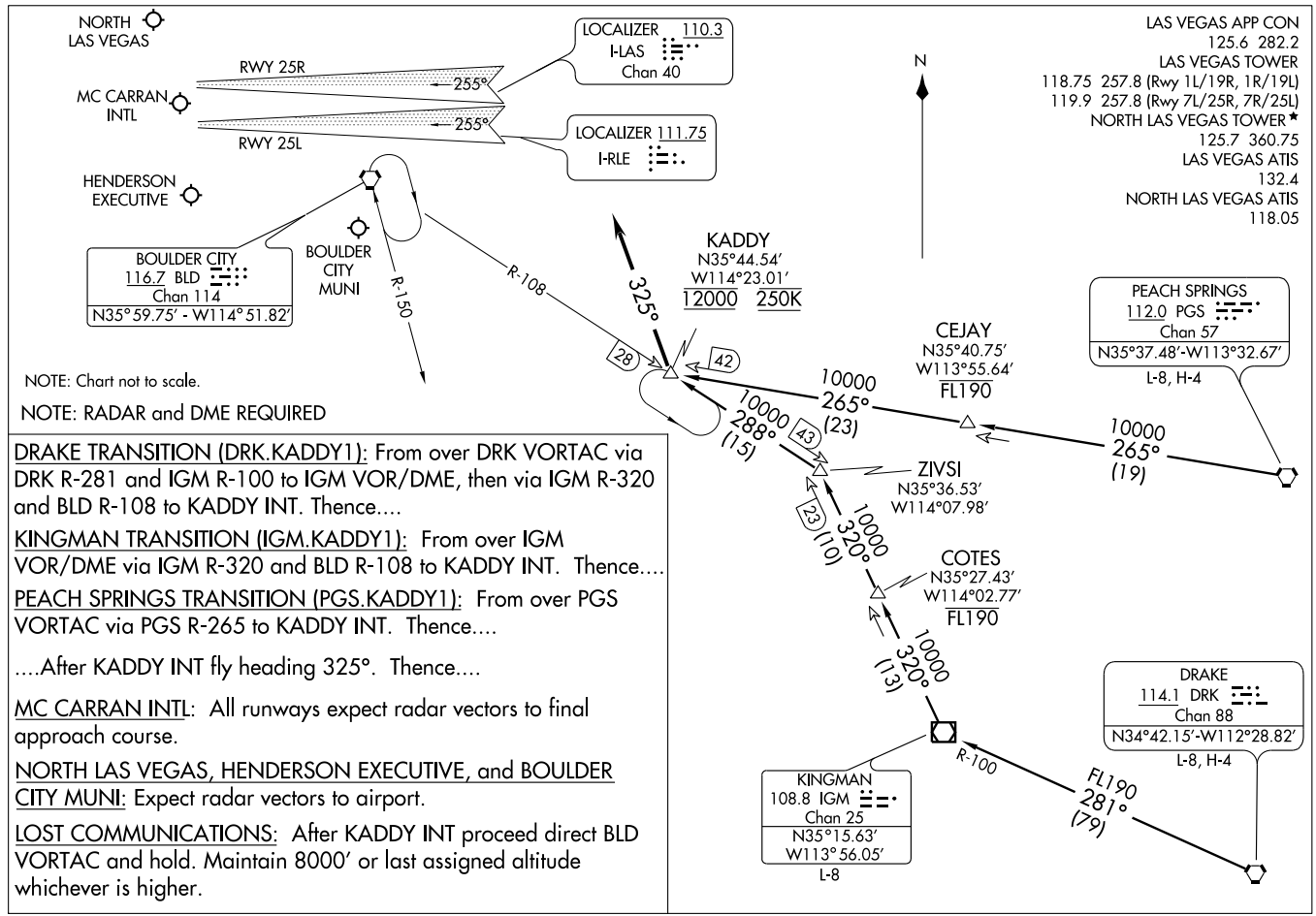
MIRL Rwys 7-25, 12R-30L and 12L-30R

FAF to MAP 8.6 NM					
Knots	60	90	120	150	180
Min:Sec	8:36	5:44	4:18	3:26	2:52



CATEGORY	A	B	C	D
S-ILS 12L	2456-1	267 (300-1)	NA	
S-LOC 12L	2580-1	391 (400-1)	NA	
CIRCLING	2680-1	475 (500-1)	NA	

KADDY ONE ARRIVAL



NOTE: Chart not to scale.

NOTE: RADAR and DME REQUIRED

DRAKE TRANSITION (DRK.KADDY1): From over DRK VORTAC via DRK R-281 and IGM R-100 to IGM VOR/DME, then via IGM R-320 and BLD R-108 to KADDY INT. Thence....

KINGMAN TRANSITION (IGM.KADDY1): From over IGM VOR/DME via IGM R-320 and BLD R-108 to KADDY INT. Thence....

PEACH SPRINGS TRANSITION (PGS.KADDY1): From over PGS VORTAC via PGS R-265 to KADDY INT. Thence....

....After KADDY INT fly heading 325°. Thence....

MC CARRAN INTL: All runways expect radar vectors to final approach course.

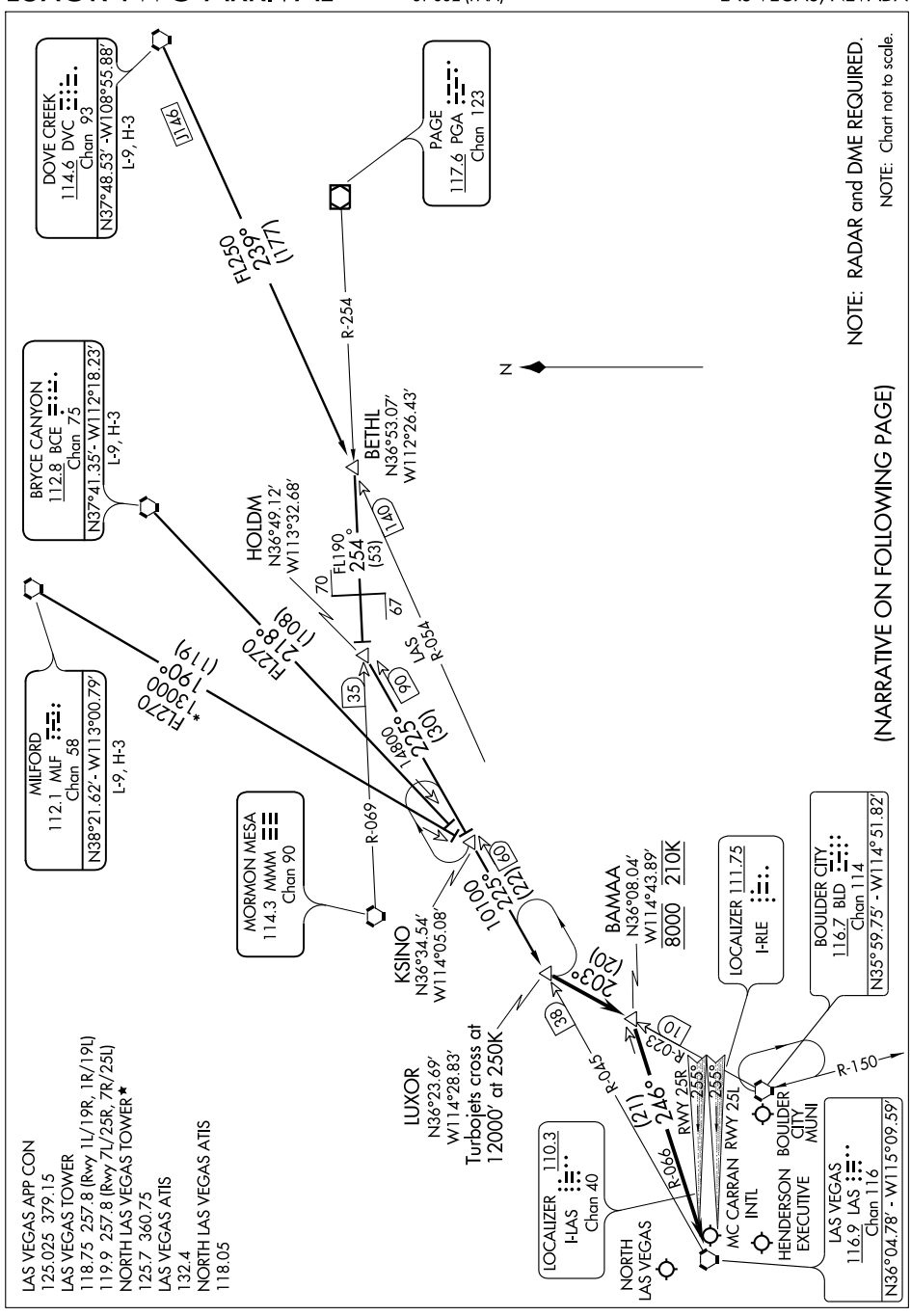
NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After KADDY INT proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

LUXOR TWO ARRIVAL

ST-662 (FAA)

LAS VEGAS, NEVADA



ARRIVAL DESCRIPTION

BETHL TRANSITION (BETHL.LUXOR2): From over BETHL INT via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

BRYCE CANYON TRANSITION (BCE.LUXOR2): From over BCE VORTAC via BCE R-218 and LAS R-045 to LUXOR INT. Thence. . . .

DOVE CREEK TRANSITION (DVC.LUXOR2): From over DVC VORTAC via DVC R-239 and LAS R-054 to BETHL INT, then via PGA R-254 and MMM R-069 to HOLDM INT, then via LAS R-045 to LUXOR INT. Thence. . . .

MILFORD TRANSITION (MLF.LUXOR2): From over MLF VORTAC via MLF R-190 and LAS R-045 to LUXOR INT. Thence. . . .

. . . .From over LUXOR INT via BLD R-023 to BAMAA INT, thence via LAS R-066 to LAS VORTAC. Thence. . . .

LANDING MC CARRAN INTL: All runways expect radar vectors to final approach course.

LANDING NORTH LAS VEGAS, HENDERSON EXECUTIVE, and BOULDER CITY MUNI: Expect radar vectors to airport.

LOST COMMUNICATIONS: After LAS VORTAC proceed direct BLD VORTAC and hold. Maintain 8000′ or last assigned altitude whichever is higher.

NORTHTOWN TWO DEPARTURE

SL-6970 (FAA)

LAS VEGAS/NORTH LAS VEGAS (VGT)
LAS VEGAS, NEVADA

ATIS 118.05
GND CON 121.7
UNICOM 122.95
CTAF 125.7

TAKE-OFF MINIMUMS

Rwy 7: Standard with minimum climb of 322′ per NM to 5000.
Rwy 12L: Standard with minimum climb of 393′ per NM to 5000.
Rwy 12R: Standard with minimum climb of 373′ per NM to 5000.
Rwy 25: Standard with minimum climb of 341′ per NM to 5000.
Rwy 30L: Standard with minimum climb of 315′ per NM to 5700.
Rwy 30R: Standard with minimum climb of 302′ per NM to 5700.

TAKE-OFF OBSTACLE NOTES

Rwy 7: Tower 1.1 NM from DER, 1044′ right of centerline, 252′ AGL/2348′ MSL.

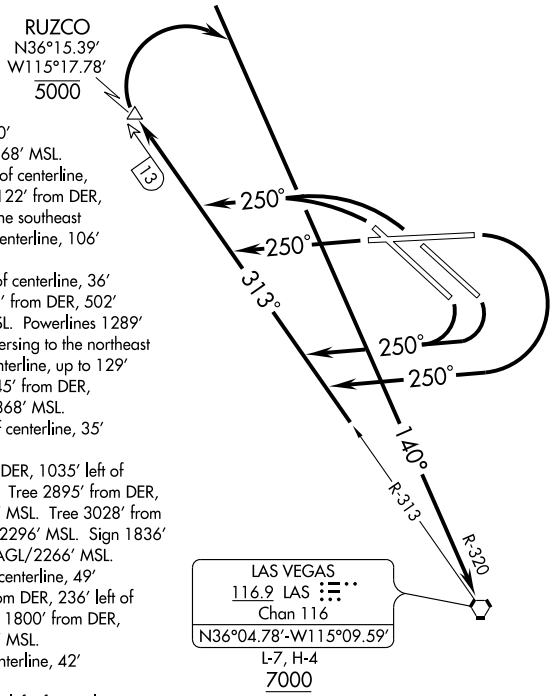
Rwy 12R: Multiple towers 1.0 NM from DER, 850′ right of centerline, up to 267′ AGL/2368′ MSL. Tower 1.2 NM from DER, 1355′ right of centerline, 270′ AGL/2367′ MSL. Power lines 1122′ from DER, 764′ right of centerline, traversing to the southeast out to 2345′ from DER, 510′ right of centerline, 106′ AGL/2344′ MSL.

Rwy 12L: Light pole 254′ from DER, 462′ right of centerline, 36′ AGL/2159′ MSL. Trucks on road 255′ from DER, 502′ right of centerline, 15′ AGL/2155′ MSL. Powerlines 1289′ from DER, 663′ right of centerline traversing to the northeast out to 1576′ from DER, 716′ left of centerline, up to 129′ AGL/2226′ MSL. Multiple towers 5045′ from DER, 1551′ right of centerline, 267′ AGL/2368′ MSL.

Rwy 25: Light pole 1447′ from DER, 21′ right of centerline, 35′ AGL/2255′ MSL.

Rwy 30L: Multiple towers/antennas 2745′ from DER, 1035′ left of centerline, up to 84′ AGL/2327′ MSL. Tree 2895′ from DER, 511′ left of centerline, 59′ AGL/2294′ MSL. Tree 3028′ from DER, 78′ right of centerline, 57′ AGL/2296′ MSL. Sign 1836′ from DER, 379′ left of centerline, 48′ AGL/2266′ MSL. Building 2070′ from DER, 249′ left of centerline, 49′ AGL/2271′ MSL. Light pole 1692′ from DER, 236′ left of centerline, 37′ AGL/2252′ MSL. Sign 1800′ from DER, 561′ left of centerline, 36′ AGL/2254′ MSL. Tree 1785′ from DER, 525′ right of centerline, 42′ AGL/2250′ MSL.

Rwy 30R: Antenna tower 4639′ from DER, 1736′ left of centerline, 84′ AGL/2327′ MSL. Anemometer 552′ from DER, 570′ left of centerline, 34′ AGL/2216′ MSL. Vent on building 1632′ from DER, 566′ right of centerline, 58′ AGL/2240′ MSL. Antenna on hangar 2012′ from DER, 195′ right of centerline, 61′ AGL/2247′ MSL.



NOTE: Do not exceed 240 KIAS until established on LAS R-320 inbound.

NOTE: DME required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 7 and 12 L/R: Climbing right turn via heading 250° and LAS R-313 outbound. Thence....

TAKE-OFF RUNWAY 25: Climb via heading 250° and LAS R-313 outbound. Thence....

TAKE-OFF RUNWAYS 30L/R: Climbing left turn via heading 250° and LAS R-313 outbound. Thence....

....via LAS R-313 maintain 5000 to RUZCO, then climbing right turn to intercept LAS R-320 to LAS VORTAC. Cross LAS VORTAC at or above 7000′.

SW-4, 14 JAN 2010 to 11 FEB 2010

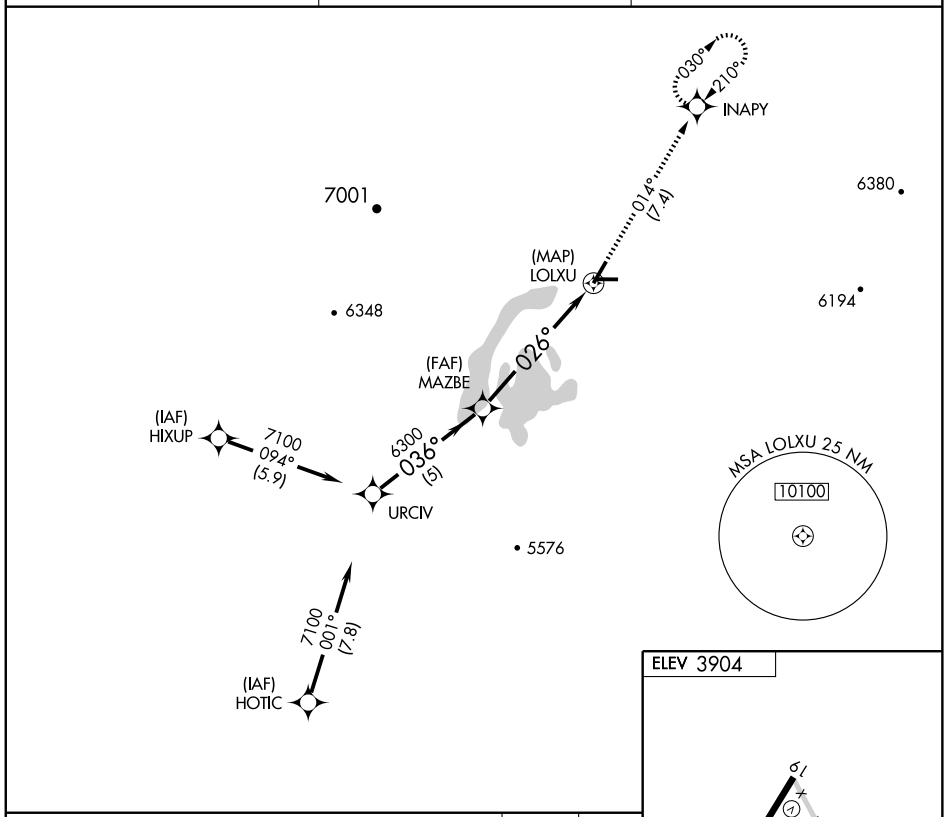
APP CRS	Rwy ldg	5529
026°	TDZE	3902
	Apt Elev	3904

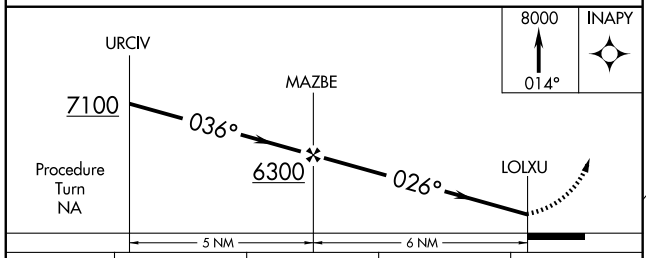
GPS RWY 1
LOVELOCK/ DERBY FIELD (LOL)

T
A NA

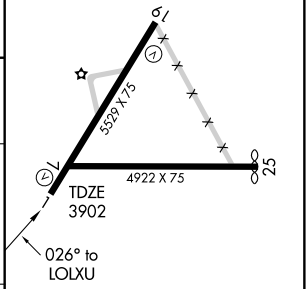
MISSED APPROACH: Climb to 8000 via 014° course to INAPY WP and hold.

ASOS	OAKLAND CENTER	UNICOM
120.675	128.8 285.5	122.8 (CTAF) L





ELEV 3904



CATEGORY	A	B	C	D
S-1	4280-1 378 (400-1)			4280-1¼ 378 (400-1¼)
CIRCLING	4320-1 416 (500-1)	4360-1 456 (500-1)	4360-1½ 456 (500-1½)	4780-2¾ 876 (900-2¾)

REIL Rwys 1 and 19 L
MIRL Rwy 1-19 L

SW-4, 14 JAN 2010 to 11 FEB 2010

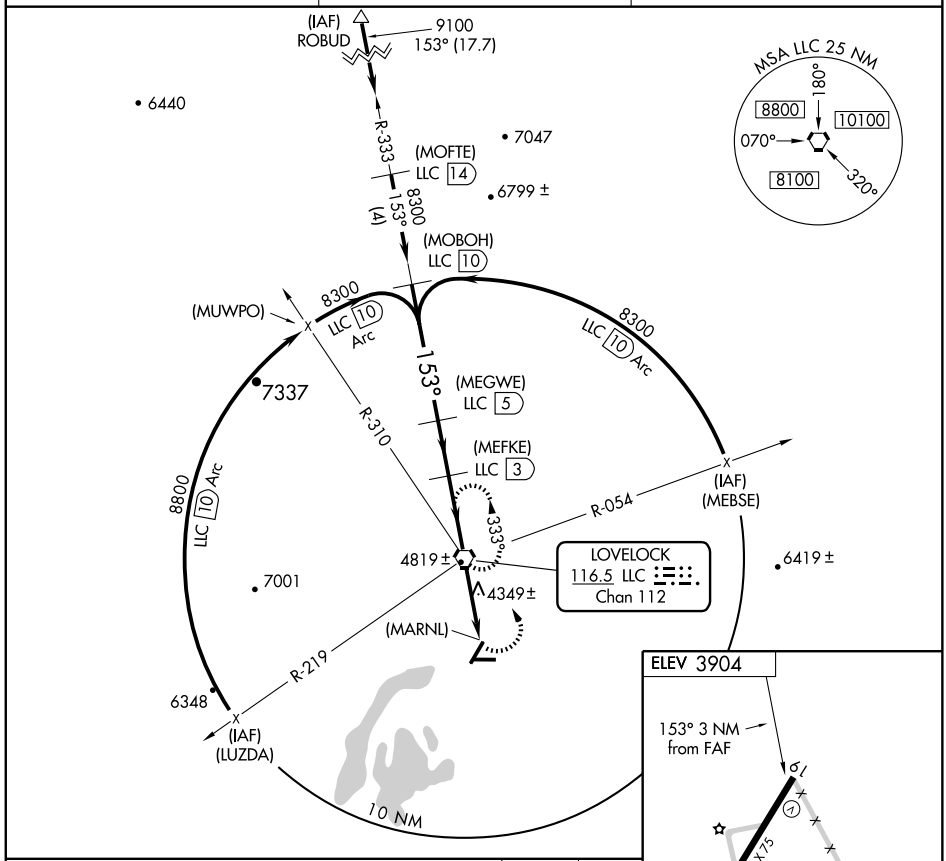
VORTAC LLC 116.5 Chan 112	APP CRS 153°	Rwy ldg N/A TDZE N/A Apt Elev 3904

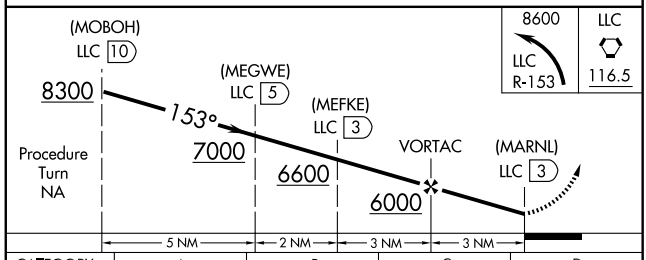
VOR/DME or GPS-A

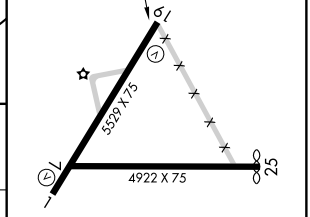
LOVELOCK/ DERBY FIELD (LOL)

MISSED APPROACH: Climbing left turn to 8600 via R-153 to LLC VORTAC and hold, continue climb in hold to 8600.

ASOS	OAKLAND CENTER	UNICOM
120.675	128.8 285.5	122.8 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	4800-1¼ 897 (900-1¼)		4800-2¾ 897 (900-2¾)	4800-3 897 (900-3)

REIL Rwys 1 and 19 L
MIRL Rwy 1-19 L

SW-4, 14 JAN 2010 to 11 FEB 2010

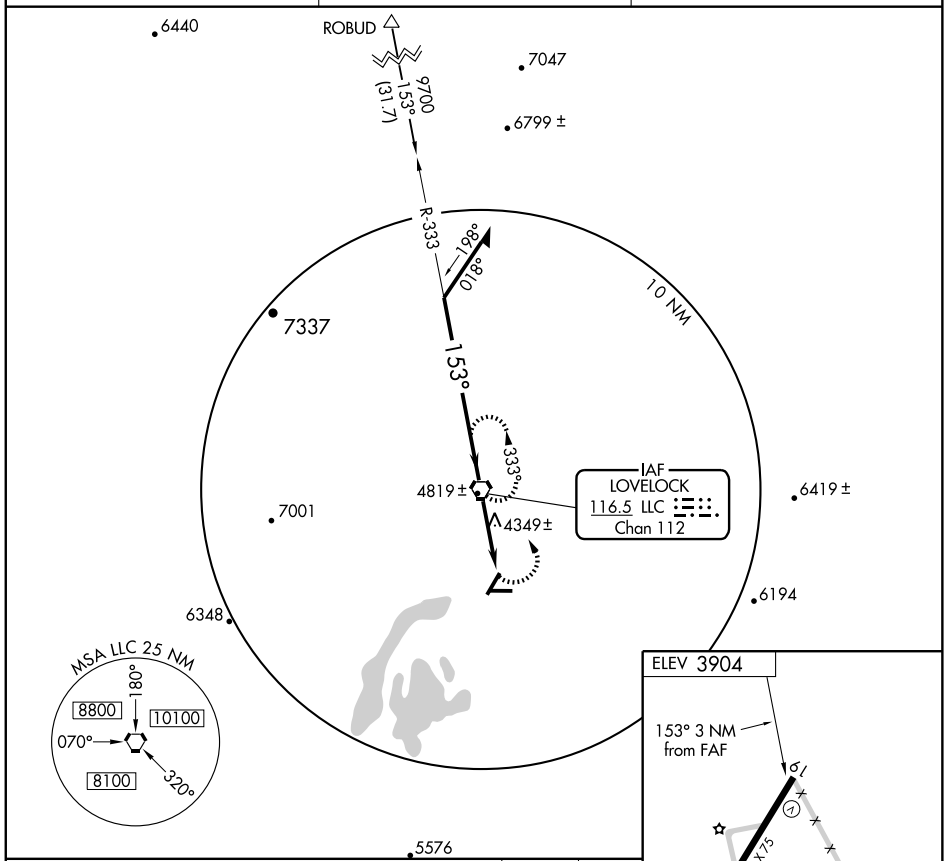
VORTAC LLC 116.5 Chan 112	APP CRS 153°	Rwy ldg N/A TDZE N/A Apt Elev 3904

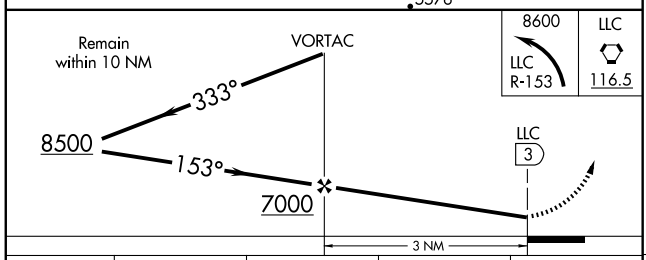
VOR or GPS-C

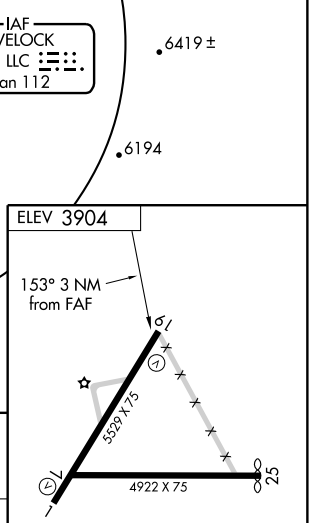
LOVELOCK/ DERBY FIELD (LOL)

MISSED APPROACH: Climbing left turn to 8600 via R-153 to LLC VORTAC and hold, continue climb-in-hold to 8600.

ASOS	OAKLAND CENTER	UNICOM
120.675	128.8 285.5	122.8 (CTAF) L







REIL Rwys 1 and 19 L
MIRL Rwy 1-19 L

CATEGORY	A	B	C	D
CIRCLING	5800-1¼ 1897 (1900-1¼)	5800-1½ 1897 (1900-1½)	5800-3 1897 (1900-3)	

FAF to MAP 3 NM					
Knots	60	90	120	150	180
Min:Sec	3:00	2:00	1:30	1:12	1:00

SW-4, 14 JAN 2010 to 11 FEB 2010

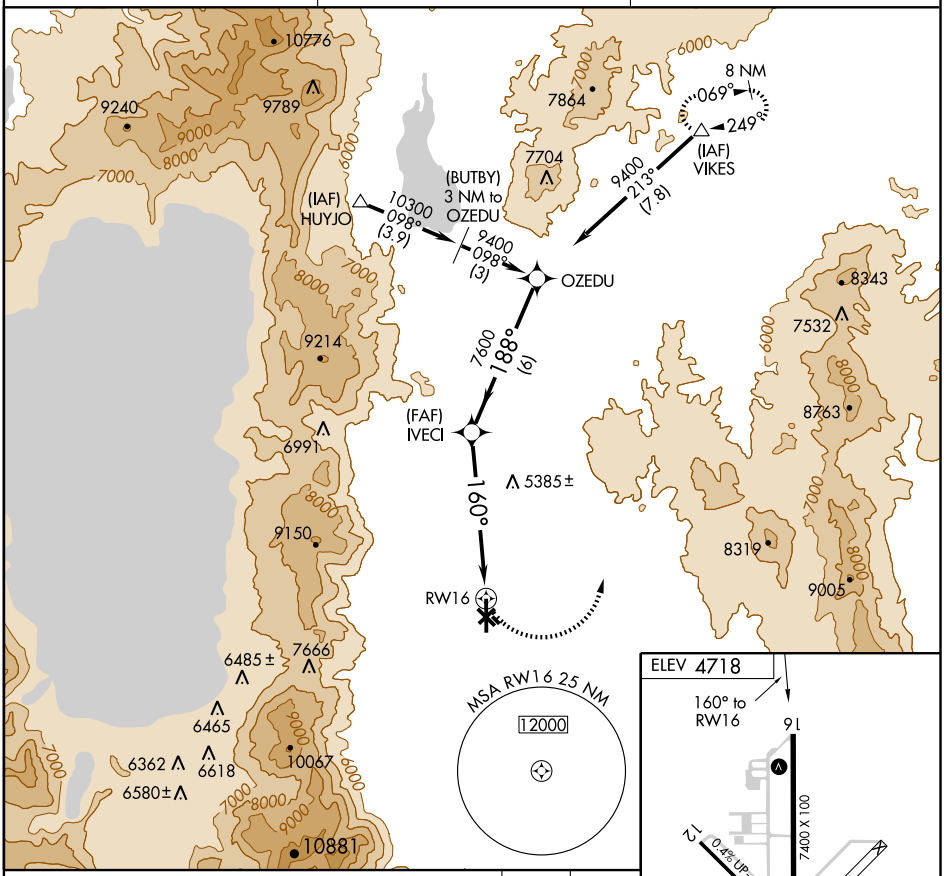
APP CRS	Rwy ldg	N/A
160°	TDZE	N/A
	Apt Elev	4718

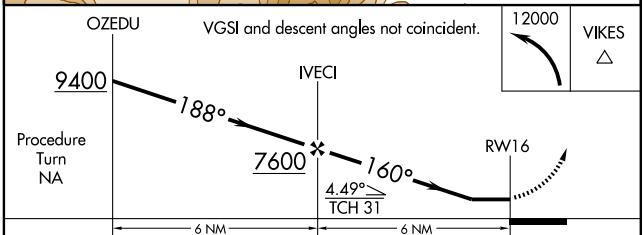
GPS-A
MINDEN-TAHOE (MEV)

NA

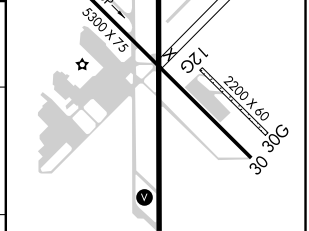
MISSED APPROACH: Climbing left turn to 12000 direct VIKES WP and hold.

AWOS-3	RENO APP CON	UNICOM
119.325	119.2 279.55	123.05 (CTAF) L





CATEGORY	A	B	C	D
CIRCLING	6220-1¼ 1502 (1600-1¼)	6220-1½ 1502 (1600-1½)	6220-3 1502 (1600-3)	



MIRL Rwy 16-34 L

SW-4, 14 JAN 2010 to 11 FEB 2010

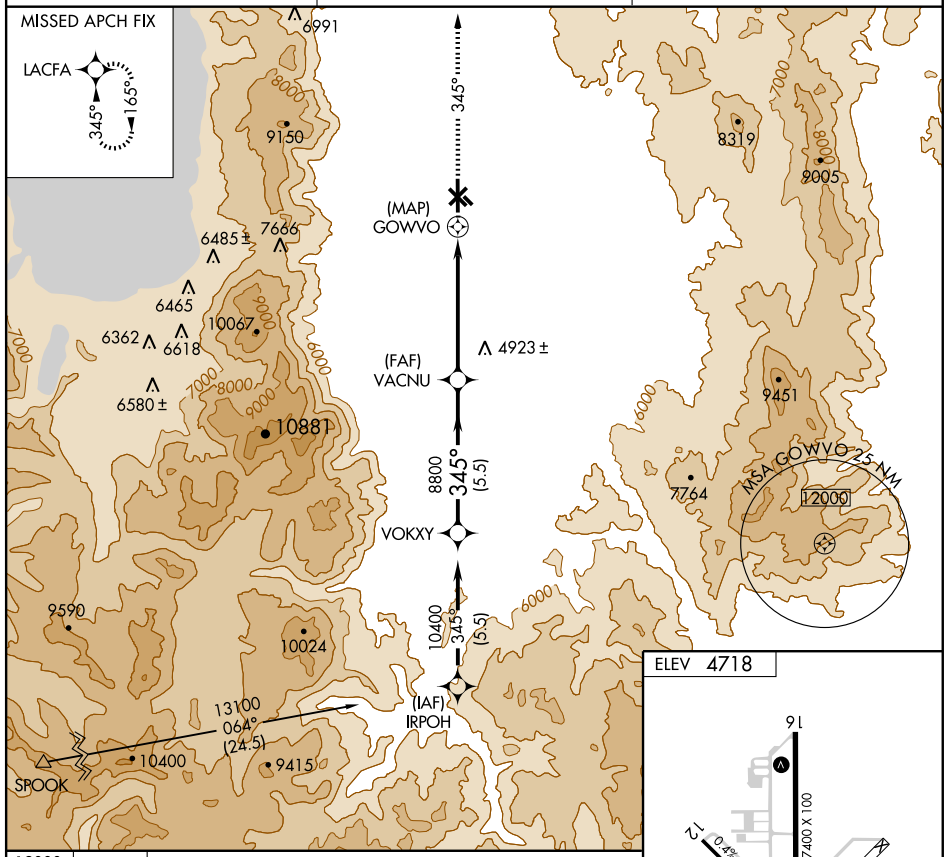
APP CRS	Rwy ldg	N/A
345°	TDZE	N/A
	Apt Elev	4718

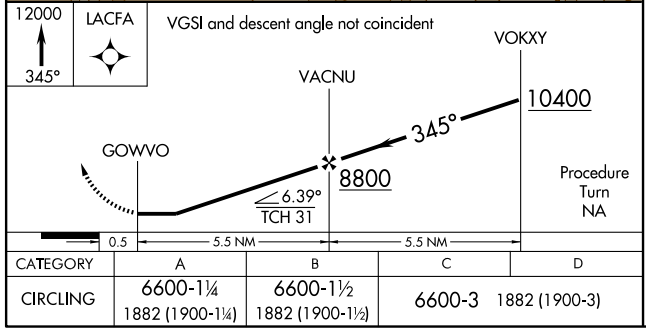
GPS-B
MINDEN-TAHOE (MEV)

NA

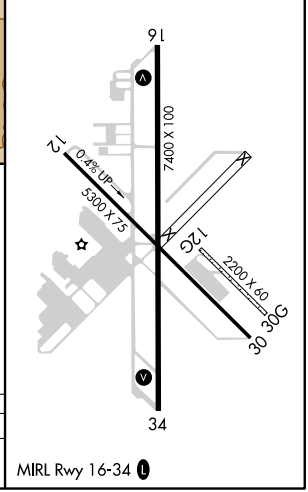
MISSED APPROACH: Climb to 12000 via 345° course to LACFA WP and hold.

AWOS-3	RENO APP CON	UNICOM
119.325	119.2 279.55	123.05 (CTAF)



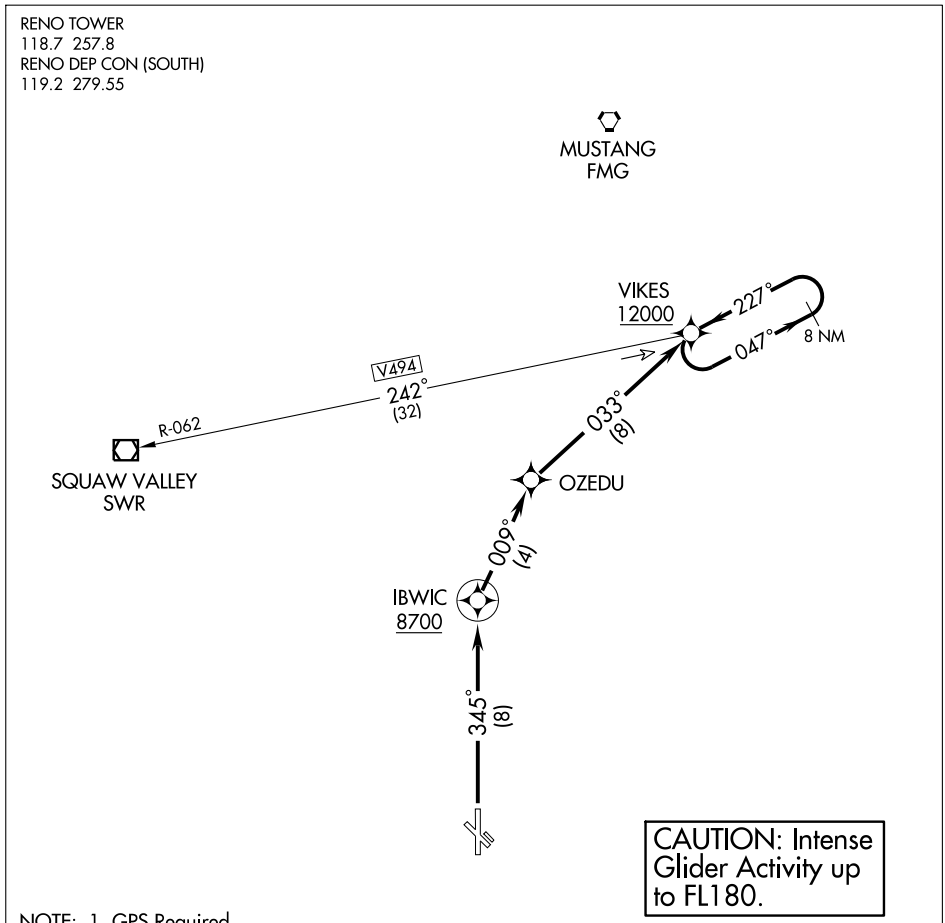


CATEGORY	A	B	C	D
CIRCLING	6600-1¼ 1882 (1900-1¼)	6600-1½ 1882 (1900-1½)	6600-3 1882 (1900-3)	



MINDEN ONE DEPARTURE (RNAV) (OBSTACLE)

RENO TOWER
118.7 257.8
RENO DEP CON (SOUTH)
119.2 279.55



NOTE: 1. GPS Required.
2. RNAV 1

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

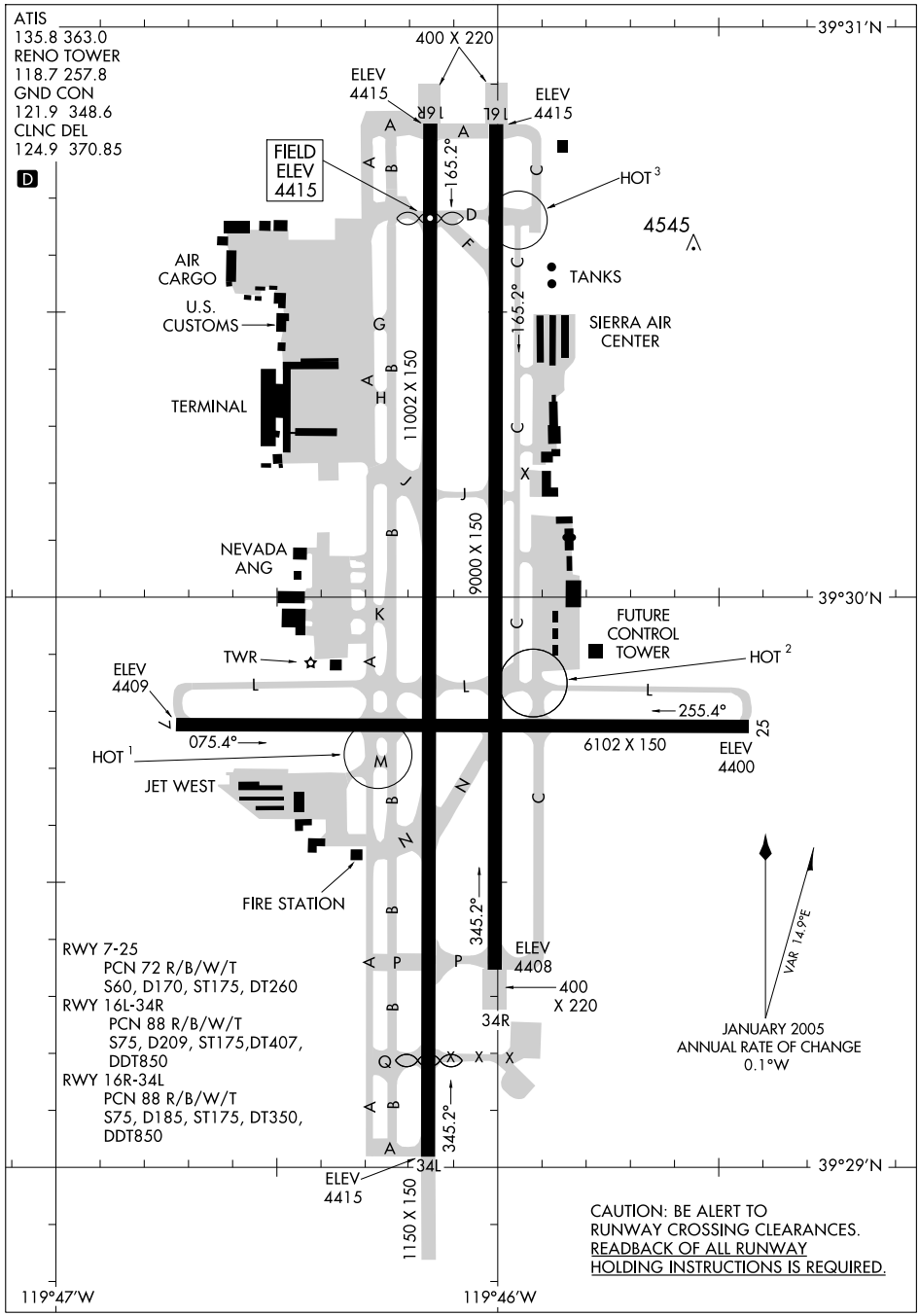
TAKE-OFF RUNWAY 34: Climb via 345° course to IBWIC WP, 009° course to OZEDU WP, and 033° course to VIKES WP, then climb in VIKES WP holding pattern (hold NE, left turns, 227° inbound) to cross VIKES WP at or above 12000 before proceeding on course.

SW-4, 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-346 (FAA)

RENO/TAHOE INTL (RNO)
RENO, NEVADA



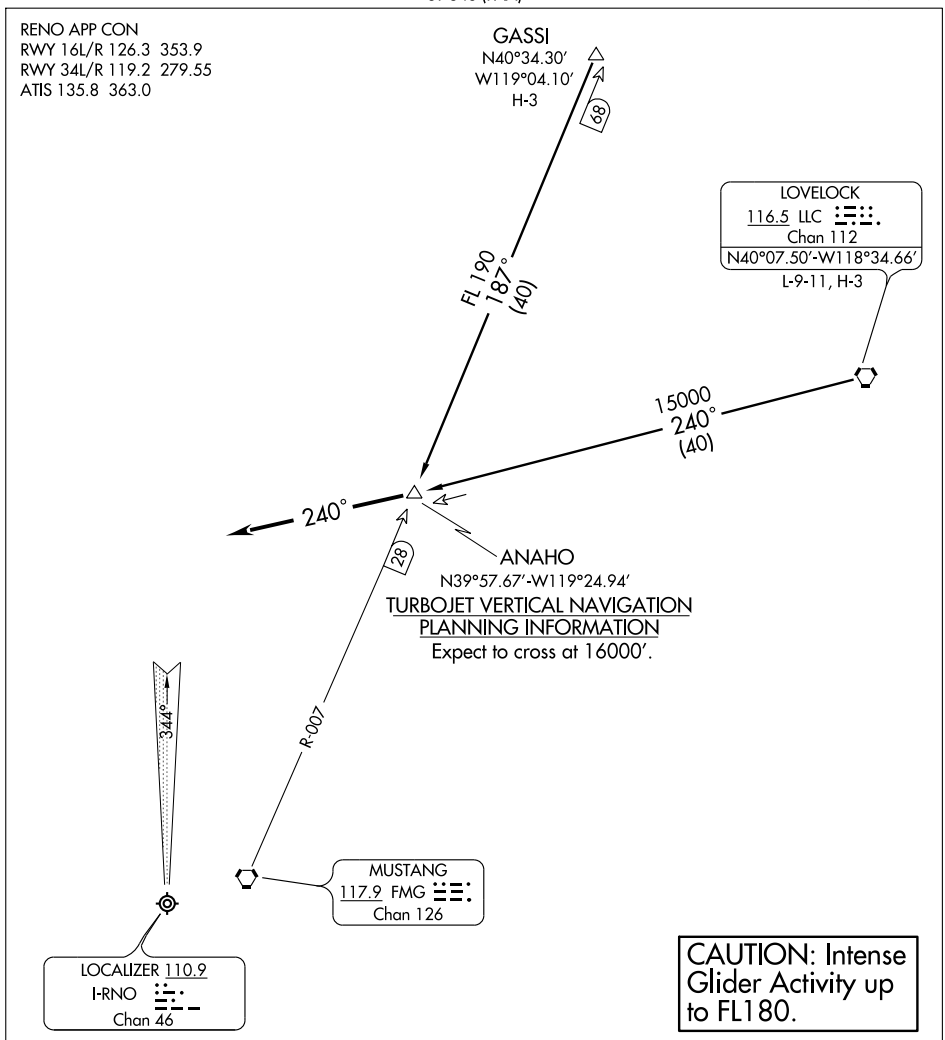
SW-4, 14 JAN 2010 to 11 FEB 2010

(ANAHO.ANAHO2) 08325

ANAHO TWO ARRIVAL

ST-346 (FAA)

RENO/TAHOE INTL
RENO, NEVADA



NOTE: RADAR required.

NOTE: Chart not to scale.

GASSI TRANSITION (GASSI.ANAHO2): From over GASSI via FMG R-007 to ANAHO INT/DME. Thence....

LOVELOCK TRANSITION (LLC.ANAHO2): From over LLC VORTAC via LLC R-240 to ANAHO INT/DME. Thence....

....Depart ANAHO INT/DME heading 240° for vectors to final approach course.

SW-4, 14 JAN 2010 to 11 FEB 2010

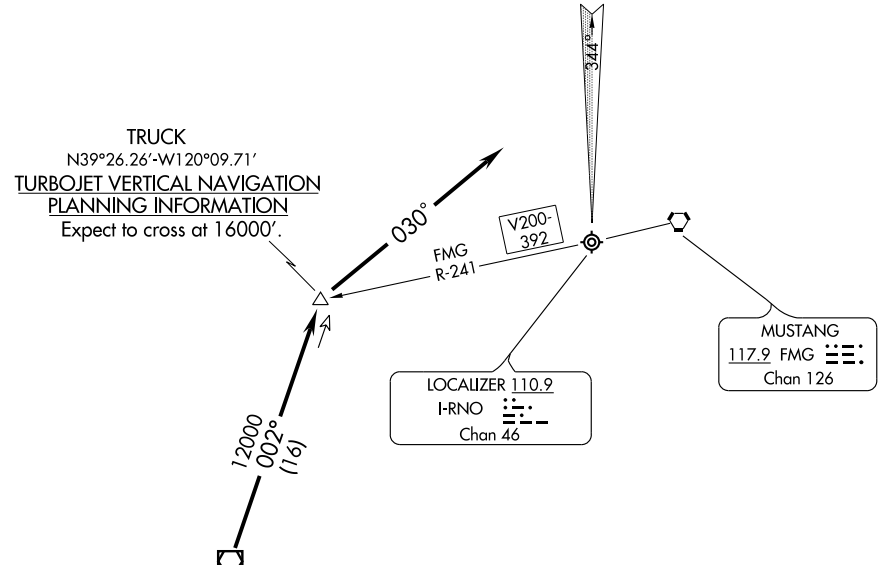
(SWR.CANN2) 08325

CANNON TWO ARRIVAL

ST-346 (FAA)

RENO/TAHOE INTL
RENO, NEVADA

RENO APP CON
RWY 16L/R 126.3 353.9
RWY 34L/R 119.2 279.55
ATIS 135.8 363.0



CAUTION: Intense Glider Activity up to FL180.

NOTE: RADAR Required.

NOTE: Chart not to scale.

From over SWR VOR/DME via SWR R-002 to TRUCK INT/DME. Depart TRUCK INT/DME heading 030° for vectors to final approach.

HI-ILS/DME RWY 16R

LOC I-RNO 110.9 Chan 46	APCH CRS 164°	Rwy ldg 10,000 TDZE 4412 Arpt Elev 4412

JAL-346 [USAF]

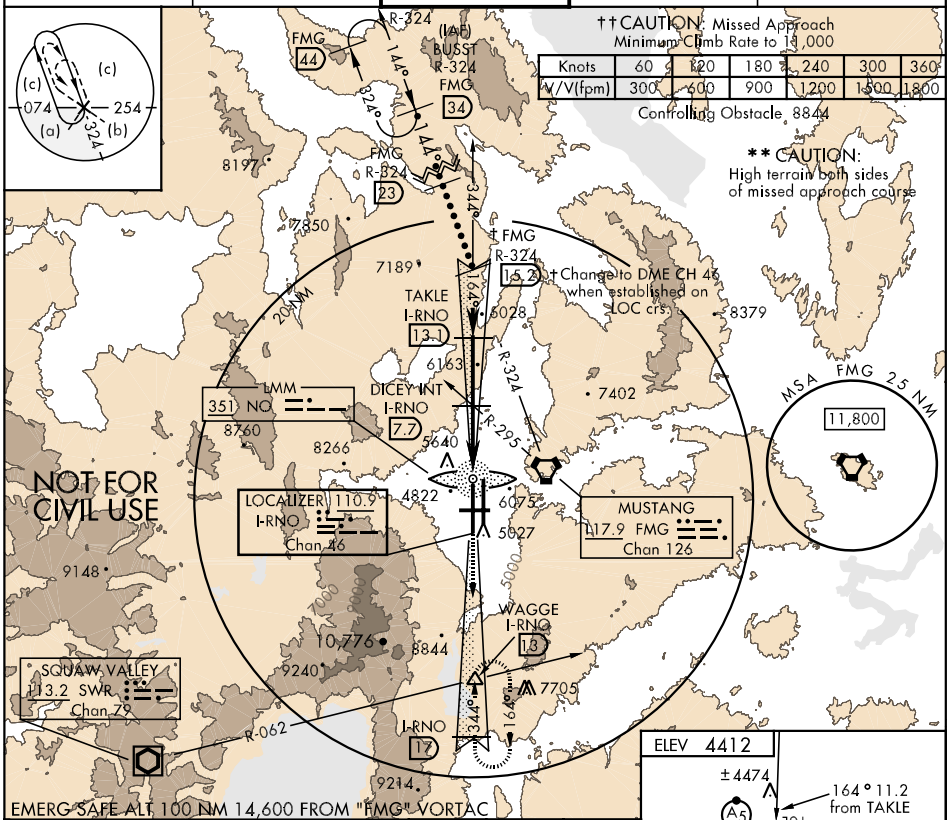
RENO/TAHOE INTL (KRNO)

Use I-RNO DME when on LOC course.
DME shall not be used to determine aircraft position over LMM, runway threshold, or runway touchdown point.

MALSR A5

†† ** MISSED APPROACH: Climb to 12,000 via I-RNO south course to 17 DME then turn left to WAGGE 13 DME and hold.

ATIS	RENO APP CON	RENO TOWER	GND CON	CLNC DEL
135.8 277.2	119.2 353.9	118.7 257.8	121.9 348.6	124.9 343.9

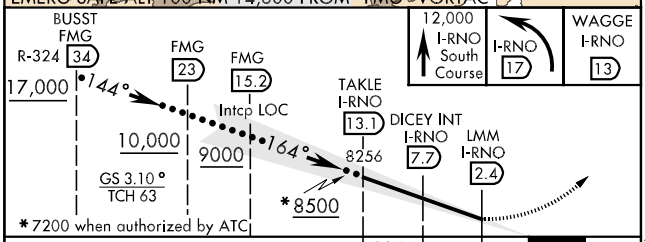


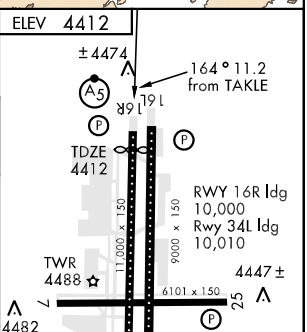
†† CAUTION: Missed Approach Minimum Climb Rate to 14,000

Knots	60	120	180	240	300	360
V/V(fpm)	300	600	900	1200	1500	1800

Controlling Obstacle 8844

** CAUTION: High terrain both sides of missed approach course





CATEGORY	C	D	E
S-ILS 16R	5012-2	600	(600-2)
S-LOC 16R	NOT AUTHORIZED		
CIRCLING	NOT AUTHORIZED		

HI-TACAN-E

VORTAC FMG	APCH CRS	Rwy ldg	N/A
117.9	239°	TDZE	N/A
Chan 126		Arpt Elev	4412

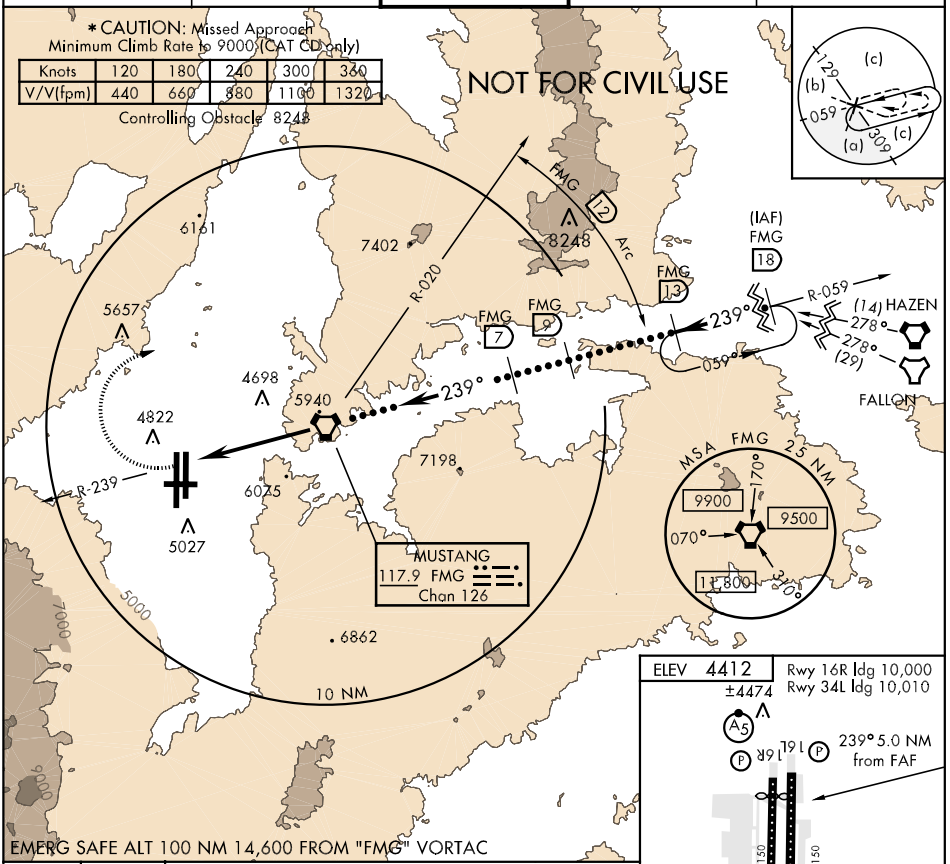
JAL-346 [USN]

RENO/TAHOE INTL (KRNO)

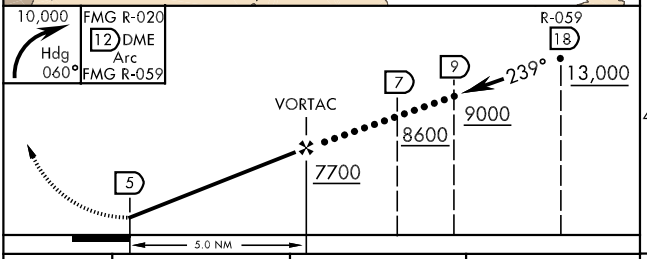
T ** Category E circling not authorized to Rwy 7-25. Approaches RADAR monitored by Reno APP CON. Arrivals from East and aircraft on missed approach may be vectored to final.

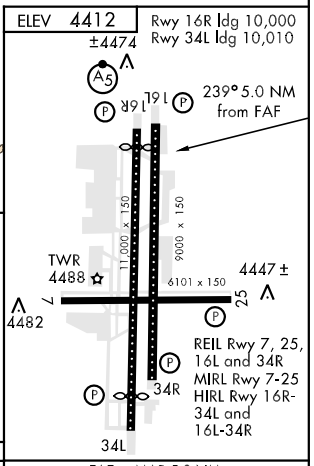
* MISSED APPROACH: Make climbing right turn to 10,000 heading 060° to R-020, then arc NE on 12 mile arc to join R-059 inbound.

ATIS	RENO APP CON	RENO TOWER	GND CON	CLNC DEL
135.8 277.2	119.2 353.9	118.7 257.8	121.9 348.6	124.9 343.9



EMERG SAFE ALT 100 NM 14,600 FROM "FMG" VORTAC





CATEGORY	C	D	E
CIRCLING **	5960-3 1548 (1600-3)		6380-3 1968 (2000-3)

FAF to MAP 5.0 NM					
Knots	120	140	160	180	200
Min:Sec	2:30	2:09	1:53	1:40	1:30

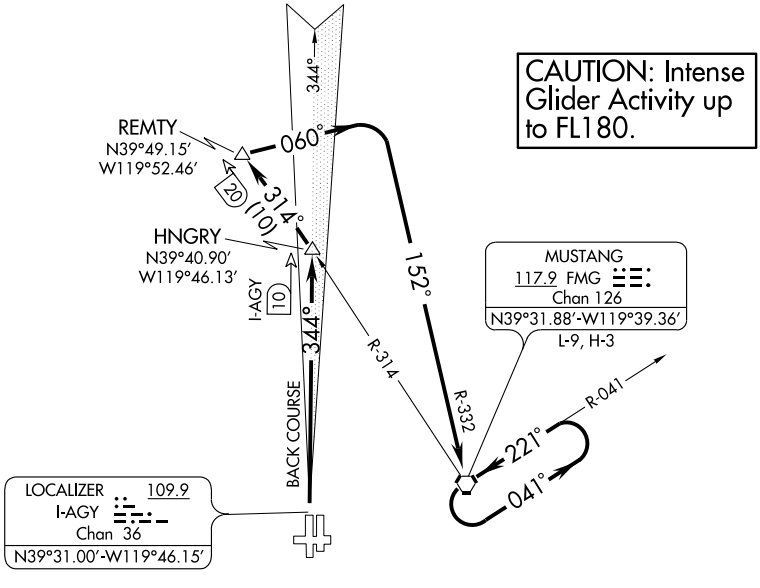
HUNGRY TWO DEPARTURE

ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8
RENO DEP CON
126.3 353.9

TAKE-OFF OBSTACLE NOTES

Rwy 34L: Multiple trees and pole beginning 1229′ from DER, 180′ right of centerline, up to 20′ AGL/4498′ MSL.
Multiple trees beginning 1193′ from DER, 331′ left of centerline, up to 20′ AGL/4489′ MSL.

Rwy 34R: Multiple trees and pole beginning 1067′ from DER, 172′ right of centerline, up to 20′ AGL/4497′ MSL.
Multiple trees and pole beginning 1230′ from DER, 350′ left of centerline, up to 20′ AGL/4498′ MSL.
Building 1.2 NM from DER, 1730′ right of centerline, 363′ AGL/4780′ MSL.



TAKE-OFF MINIMUMS

Rwy 7: NA- obstacles
Rwys 16L, 16R, 25: NA-ATC.
Rwy 34L: Standard with minimum climb of 315′ per NM to 8400.
Rwy 34R: Standard with minimum climb of 480′ per NM to 8400 or, 500-1½ with minimum climb of 315′ per NM to 8400.

NOTE: DME required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 34L/R: Climb to 10000 or assigned altitude via I-AGY localizer north course to HNGRY INT/I-AGY 10 DME, and intercept FMG R-314 to REMTY/FMG 20 DME, and right turn heading 060° to intercept FMG R-332 to FMG VORTAC. Climb in FMG holding pattern to depart FMG VORTAC at or above MEA/MCA for route of flight. Expect clearance to requested altitude five minutes after departure.

LOC/DME I-AGY 109.9 Chan 36	APP CRS 344°	Rwy ldg 10012 TDZE 4410 Apt Elev 4415

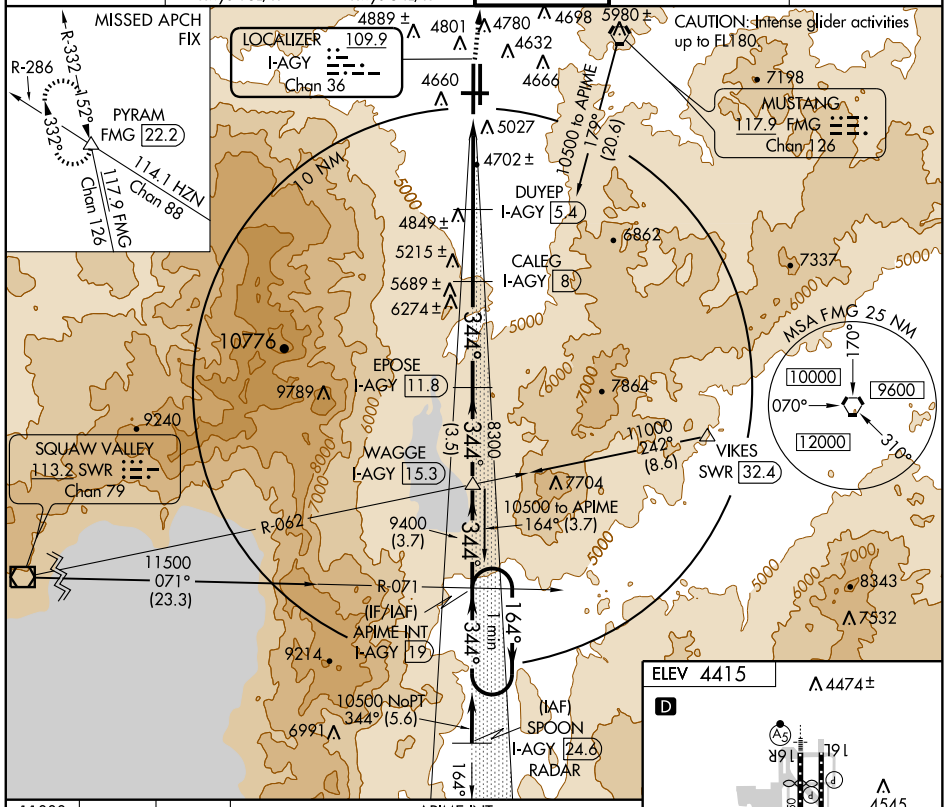
ILS or LOC/DME RWY 34L

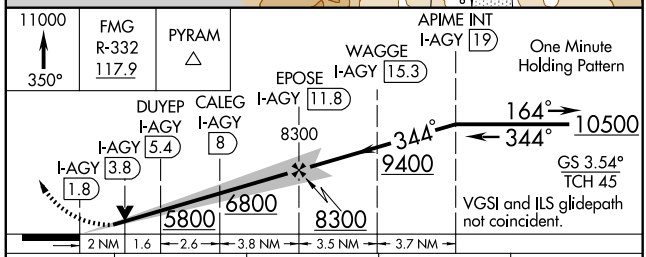
RENO/TAHOE INTL (RNO)

Inoperative table does not apply.
If local altimeter setting not received, procedure NA.

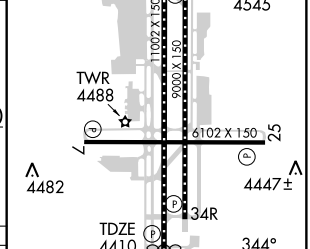
MISSED APPROACH: Climb to 11000 via heading 350° and FMG VORTAC R-332 to PYRAM INT/FMG 22.2 DME and hold, continue climb-in-hold to 11000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





CATEGORY	A	B	C	D
S-ILS 34L	4946-1½ 536 (600-1½)			NA
S-LOC 34L	5120-1 710 (800-1)		5120-2 710 (800-2)	NA
CIRCLING	5340-1¼ 925 (1000-1¼)		5340-2¾ 925 (1000-2¾)	NA



SW-4, 14 JAN 2010 to 11 FEB 2010

LOC/DME I-RNO	APP CRS	Rwy ldg	10003
110.9	164°	TDZE	4415
Chan 46		Apt Elev	4415

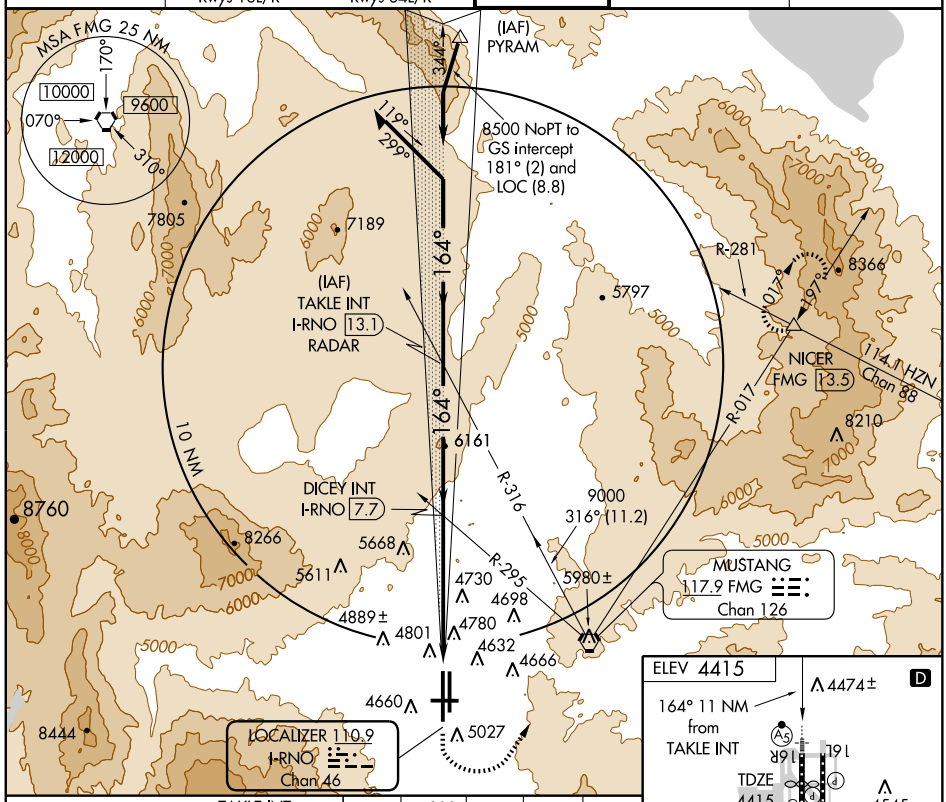
ILS RWY 16R
RENO/TAHOE INTL (RNO)

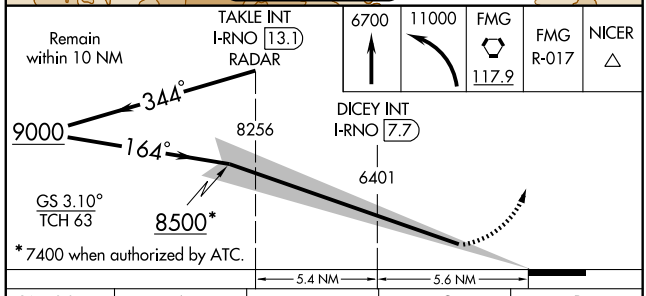
Inoperative table does not apply.
When GS not used, use LOC Rwy 16R procedure.

MALSR

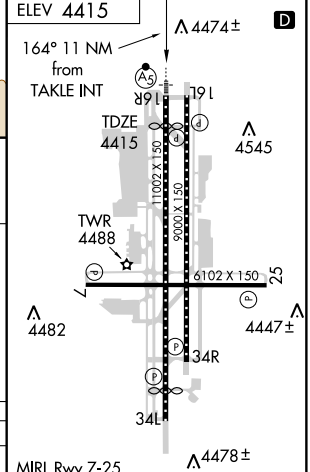
MISSED APPROACH: Climb to 6700, then climbing left turn to 11000 direct FMG VORTAC, then via FMG R-017 to NICER INT/FMG 13.5 DME and hold.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





*7400 when authorized by ATC.



MIRL Rwy 7-25
REIL Rwys 7, 16L, 25 and 34R
HIRL Rwys 16R-34L and 16L-34R

CATEGORY	A	B	C	D
S-ILS 16R	6446-7 2031 (2100-7)			
S-LOC 16R	NA			
CIRCLING	NA			

SW-4, 14 JAN 2010 to 11 FEB 2010

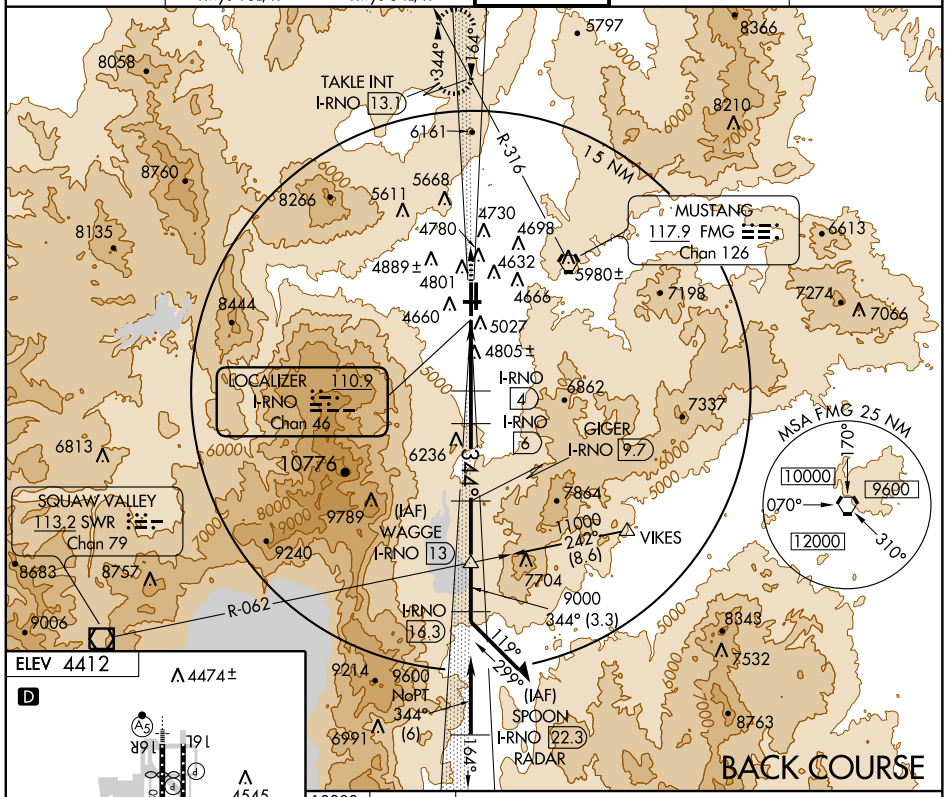
LOC/DME I-RNO 110.9 Chan 46	APP CRS 344°	Rwy ldg 10012 TDZE 4407 Apt Elev 4412

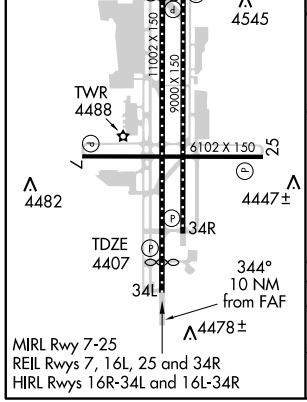
LOC/DME BC RWY 34L

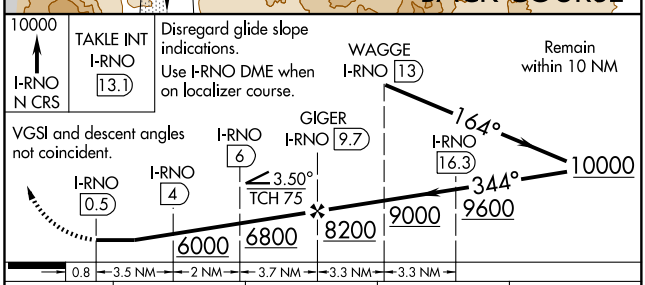
RENO/TAHOE INTL (RNO)

MISSED APPROACH: Climb to 10000 via I-RNO north course to TAKLE/I-RNO 13.1 DME and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85







CATEGORY	A	B	C	D
S-34L	5060-1 653 (700-1)		5060-1¾ 653 (700-1¾)	5060-2 653 (700-2)
CIRCLING	5340-1¼ 928 (1000-1¼)		5340-2¾ 928 (1000-2¾)	5340-3 928 (1000-3)

LOC/DME I-RNO 110.9 Chan 46	APP CRS 164°	Rwy ldg 10003 TDZE 4415 Apt Elev 4415

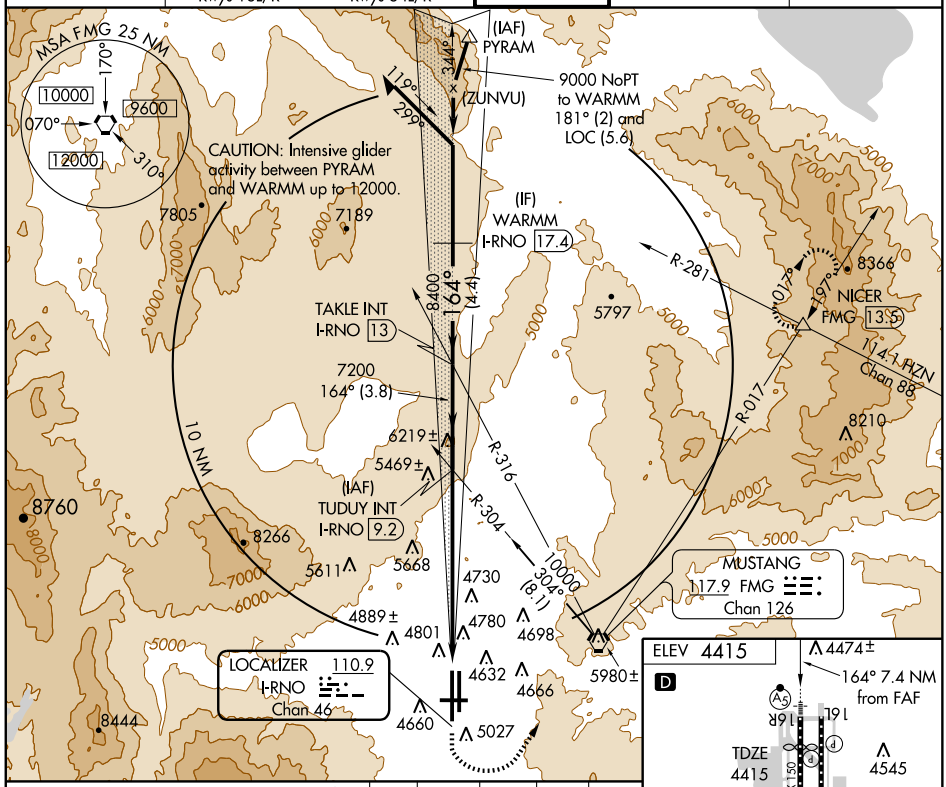
LOC RWY 16R
RENO/TAHOE INTL (RNO)

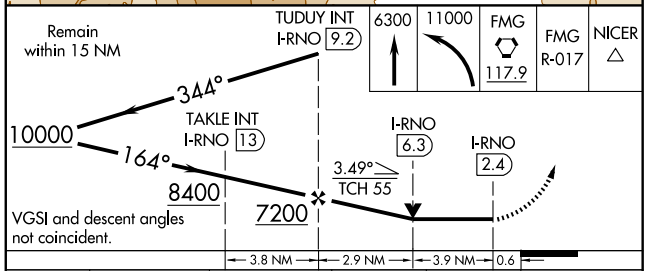
Inoperative table does not apply to S-16R Cats A and B. For inoperative MALSR; increase S-16R Cat E visibility to 3 miles. VDP does not apply to Cat E aircraft.

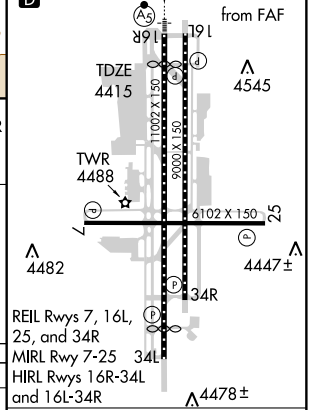
MALSR

MISSED APPROACH: Climb to 6300, then climbing left turn to 11000 direct FMG VORTAC and via FMG VORTAC R-017 to NICER INT/FMG 13.5 DME and hold, continue climb-in-hold to 11000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85







CATEGORY	A	B	C	D	E
S-16R	5980/60 1565 (1600-1¼)	5980-1½ 1565 (1600-1½)	5980-2½ 1565 (1600-2½)		6100-2½ 1685 (1700-2½)
CIRCLING	5980-1¼ 1565 (1600-1¼)	5980-1½ 1565 (1600-1½)	5980-3 1565 (1600-3)		6780-3 2365 (2400-3)

FAF to MAP 6.8 NM

Knots	60	90	120	150	180
Min:Sec	6:48	4:32	3:24	2:43	2:16

MUSTANG SEVEN DEPARTURE

SL-346 (FAA)

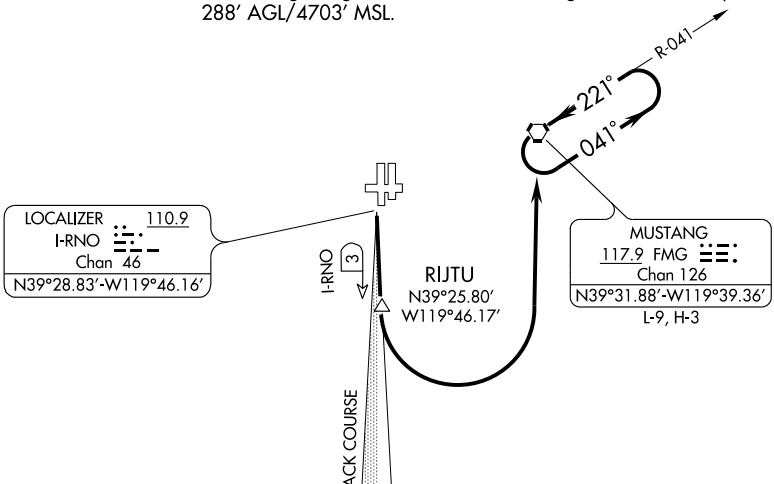
RENO/TAHOE INTL (RNO)
RENO, NEVADA

ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8
RENO DEP CON
119.2 325.8

TAKE-OFF OBSTACLE NOTES

Rwy 16L: Multiple antennas, trees, and light poles beginning 618′ from DER, 131′ left of centerline, up to 40′ AGL/4449′ MSL.
Terrain beginning 5189′ from DER, 821′ left of centerline, up to 5027′ MSL.

Rwy 16R: Multiple antennas, trees, and light poles beginning 746′ from DER, 380′ left of centerline, up to 95′ AGL/4510′ MSL.
Terrain beginning 2784′ from DER, 990′ right of centerline, up to 288′ AGL/4703′ MSL.



CAUTION: Intense Glider Activity up to FL180.

TAKE-OFF MINIMUMS

Rwy 7: NA- obstacles
Rwys 25, 34L/34R: NA- ATC.
Rwy 16L: Standard with minimum climb of 740′ per NM to 8000 or, 600-1¼ with minimum climb of 525′ per NM to 8000.
Rwy 16R: Standard with minimum climb of 740′ per NM to 8000 or, 600-1¼ with minimum climb of 525′ per NM to 8000.

NOTE: DME required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 16L/R: Climb to 10000 or assigned altitude, via I-RNO south course to RIJTU/3 DME, then left turn direct FMG VORTAC. Climb in FMG holding pattern to depart FMG VORTAC at or above MEA/MCA for direction of flight. Expect clearance to requested altitude five minutes after departure.

SW-4, 14 JAN 2010 to 11 FEB 2010

RENO FOUR DEPARTURE

SL-346 (FAA)

RENO/TAHOE INTL (RNO)
RENO, NEVADA

TAKE-OFF MINIMUMS

Rwy 7: NA- Obstacles.

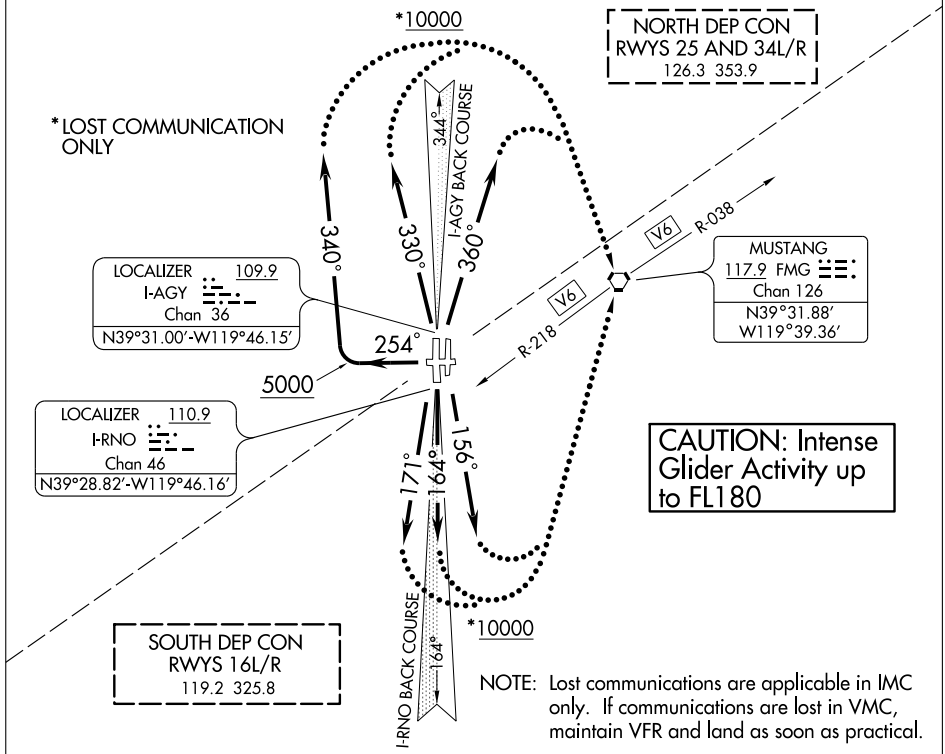
Rwy 16L: Standard with minimum climb of 730′ per NM to 9900, or 600-1¼ with minimum climb of 370′ per NM to 9900.

Rwy 16R: Standard with minimum climb of 460′ per NM to 10800, or 300-1 with minimum climb of 395′ per NM to 10800.

Rwy 25: Standard with minimum climb of 490′ per NM to 8600.

Rwys 34L/R: Standard with mimimum climb of 480′ per NM to 7000, or 500-1½ with minimum climb of 380′ per NM to 7000.

ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8



NOTE: Lost communications are applicable in IMC only. If communications are lost in VMC, maintain VFR and land as soon as practical.

TAKEOFF OBSTACLE NOTES

Rwy 16L: Multiple poles, trees, bushes, and terrain beginning 618′ from DER, 133′ left of centerline, up to 20′ AGL/4961′ MSL.

Rwy 16R: Multiple trees 2784′ from DER, 171′ right of centerline, up to 20′ AGL/4510′ MSL.
Multiple trees and terrain beginning 746′ from DER, 380′ left of centerline, up to 20′ AGL/4703′ MSL.

Rwy 25: Multiple trees and poles beginning 829′ from DER, 201′ right of centerline, up to 103′ AGL/4523′ MSL.
Building 6023′ from DER, 456′ right of centerline, 152′ AGL/4608′ MSL.
Fence 222′ from DER, 270′ right of centerline, up to 5′ AGL/4415′ MSL.
Multiple trees and poles beginning 500′ from DER, 31′ left of centerline, up to 20′ AGL/4506′ MSL.

Rwy 34L: Multiple trees and pole beginning 1229′ from DER, 180′ right of centerline, up to 20′ AGL/4498′ MSL.
Multiple trees beginning 1193′ from DER, 331′ left of centerline, up to 20′ AGL/4489′ MSL.

Rwy 34R: Multiple trees and poles beginning 1067′ from DER, 172′ right of centerline, up to 20′ AGL/4497′ MSL.
Multiple trees and poles beginning 1230′ from DER, 350′ left of centerline, up to 20′ AGL/4498′ MSL.
Building 1.2 NM from DER, 1730′ right of centerline, 363′ AGL/4780′ MSL.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

SW-4, 14 JAN 2010 to 11 FEB 2010

RENO FOUR DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 16L: Climb via I-RNO localizer South course. Thence....

TAKE-OFF RUNWAY 16R: Climb heading 156° CW 171° as assigned by ATC. Thence...

TAKE-OFF RUNWAY 25: Climb 254° heading to 5000 then climbing right turn heading 340°. Thence....

TAKE-OFF RUNWAYS 34L/R: Climb heading 330° CW 360° as assigned by ATC. Thence....

..... All aircraft maintain 15000 or assigned altitude. Expect clearance to requested altitude five minutes after departure. Expect radar vectors to assigned route/fix.

LOST COMMUNICATIONS: If not in contact with departure control within one minute after take-off, maintain assigned heading until passing 10,000; Thence....

....RUNWAYS 16L/R DEPARTURES: Turn left direct FMG VORTAC, then via assigned route.

....RUNWAYS 25 AND 34L/R DEPARTURES: Turn right direct FMG VORTAC, then via assigned route.

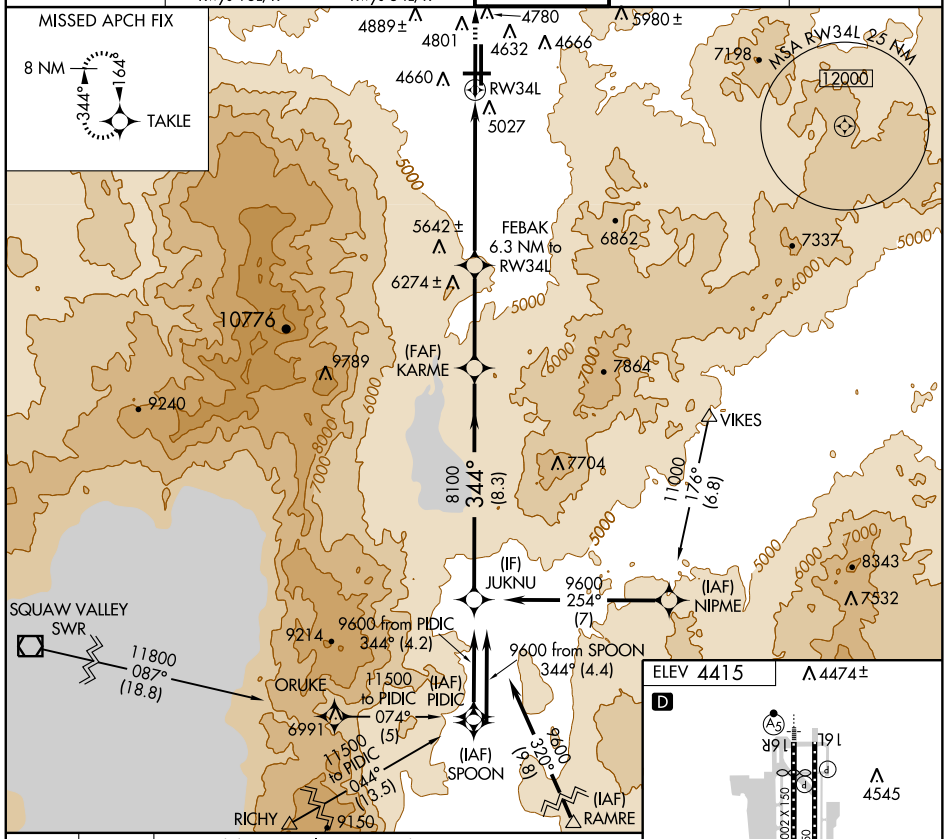
APP CRS	Rwy ldg	10012
344°	TDZE	4410
	Apt Elev	4415

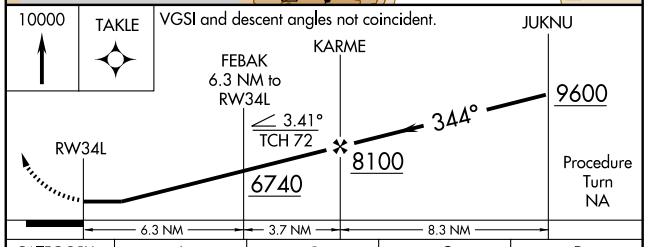
RNAV (GPS) X RWY 34L
RENO/TAHOE INTL (RNO)

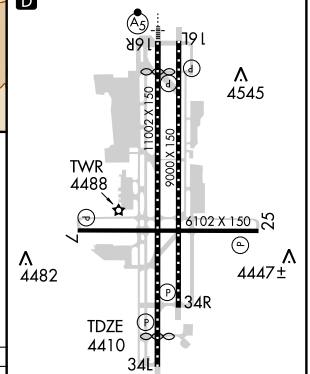
Circling to Rwy 7, 25 NA at night. DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.
For inoperative MALSR increase LNAV Cat. A and B visibility to 1¼ .

MISSED APPROACH: Climb to 10000 direct TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9	119.2 279.55	118.7 257.8	121.9 348.6	124.9 370.85
	Rwys 16L/R	Rwys 34L/R			







CATEGORY	A	B	C	D
LNAV MDA	5300-1 890 (900-1)		5300-2¼ 890 (900-2¼)	5300-2½ 890 (900-2½)
CIRCLING	5340-1¼ 925 (1000-1¼)		5340-2¾ 925 (1000-2¾)	5340-3 925 (1000-3)

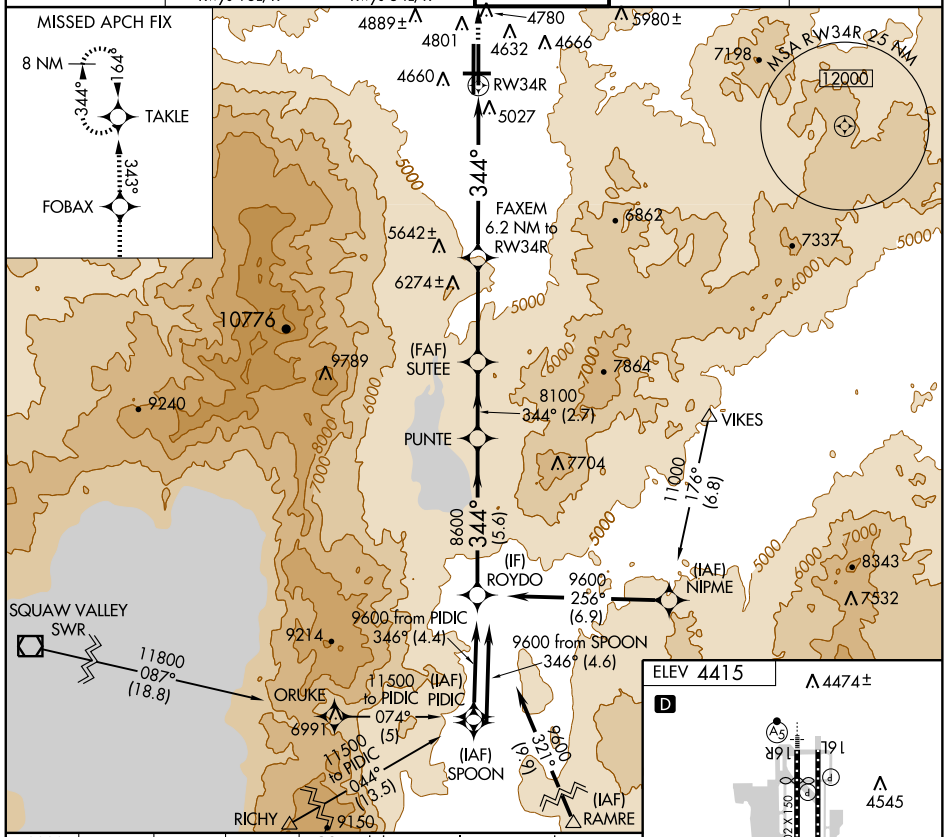
APP CRS	Rwy ldg	9000
344°	TDZE	4408
	Apt Elev	4415

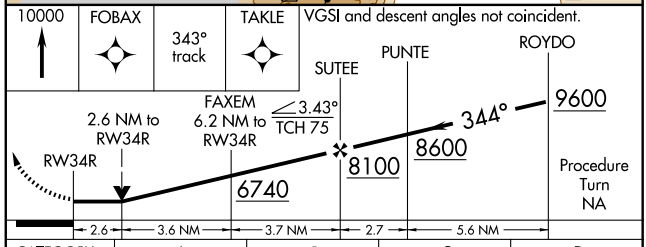
RNAV (GPS) X RWY 34R
RENO/TAHOE INTL (RNO)

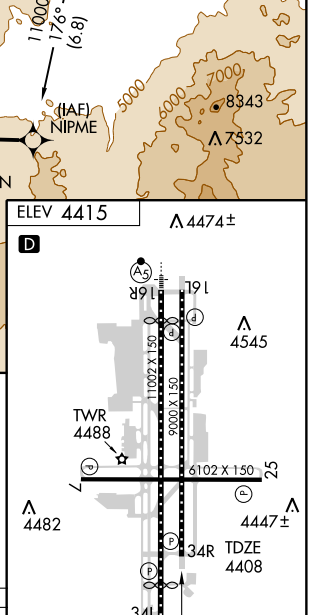
Circling to Rwy 7, 25 NA at night.
DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 10000 direct FOBAX and via 343° track to TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85







CATEGORY	A	B	C	D
LNAV MDA	5300-1¼ 892 (900-1¼)		5300-2¾ 892 (900-2¾)	5300-3 892 (900-3)
CIRCLING	5340-1¼ 925 (1000-1¼)		5340-2¾ 925 (1000-2¾)	5340-3 925 (1000-3)

SW-4, 14 JAN 2010 to 11 FEB 2010

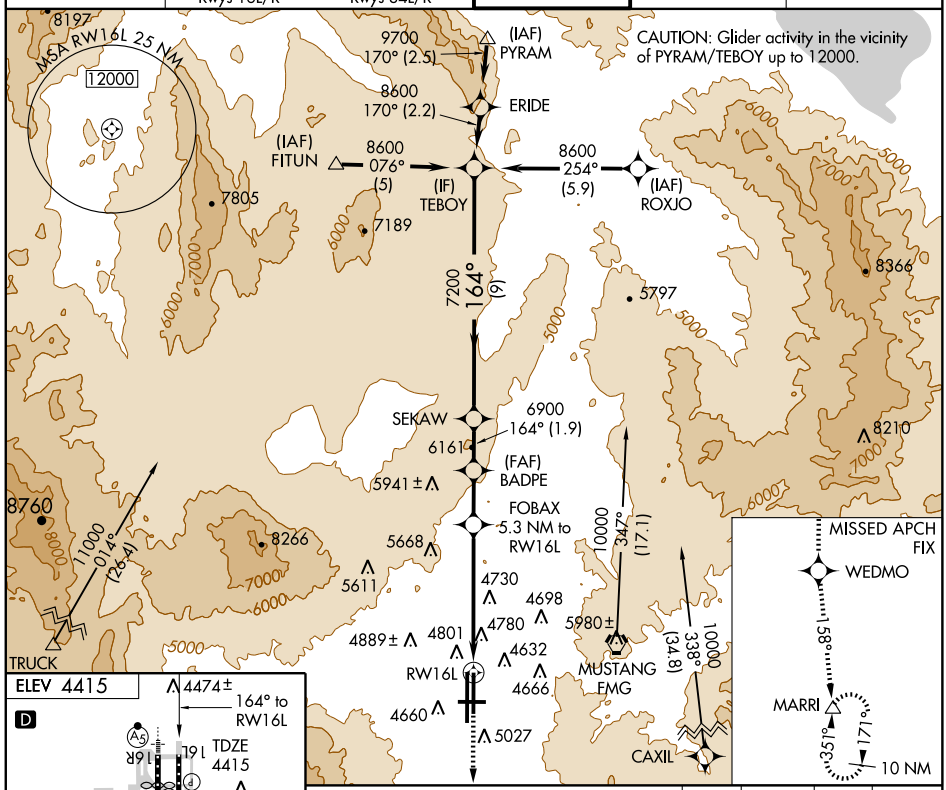
WAAS CH 72909 W16A	APP CRS 164°	Rwy ldg 9000 TDZE 4415 Apt Elev 4415

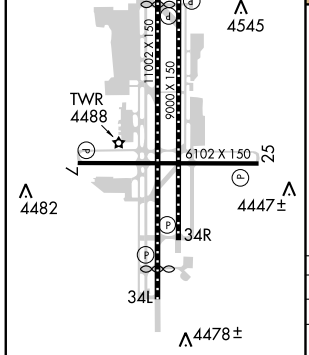
RNAV (GPS) Y RWY 16L
RENO/TAHOE INTL (RNO)

Circling to Rwy 7, 25 NA at night.
DME/DME RNP- 0.3 NA.

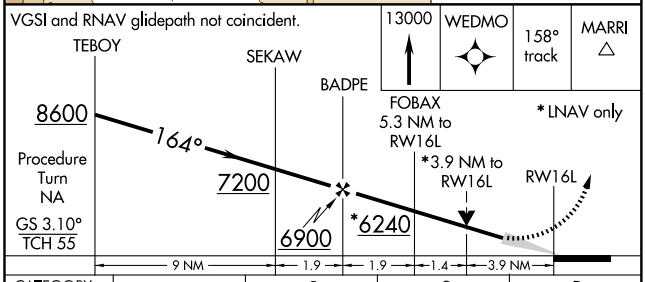
MISSED APPROACH: Climb to 13000 direct WEDMO and via 158° track to MARRI and hold.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





MIRL Rwy 7-25
REIL Rwys 7, 16L, 25, and 34R
HIRL Rwys 16R-34L and 16L-34R



CATEGORY	A	B	C	D
LPV DA	5220-2¾ 805 (900-2¾)			
LNAV MDA	5720-1¼ 1305 (1400-1¼)	5720-1½ 1305 (1400-1½)	5720-3	1305 (1400-3)
CIRCLING	5720-1¼ 1305 (1400-1¼)	5720-1½ 1305 (1400-1½)	5720-3	1305 (1400-3)

WAAS CH 78309 W16B	APP CRS 164°	Rwy ldg 10003 TDZE 4415 Apt Elev 4415

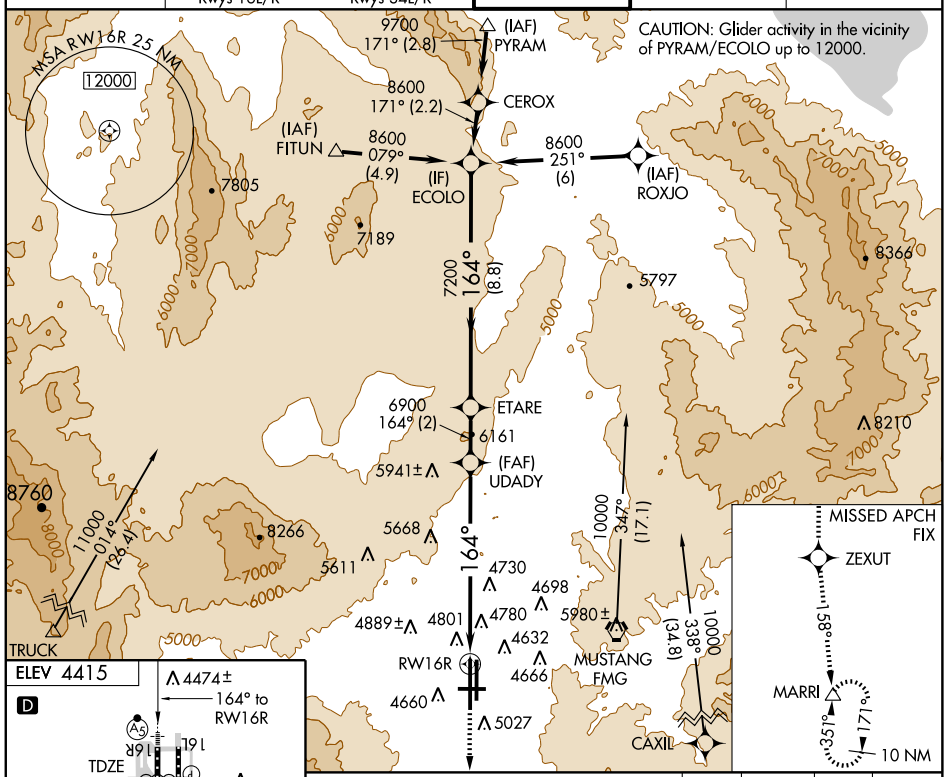
RNAV (GPS) Y RWY 16R
RENO/TAHOE INTL (RNO)

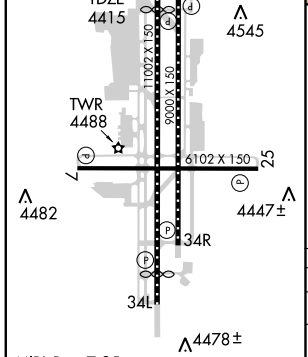
Circling to Rwy 7, 25 NA at night. DME/DME RNP- 0.3 NA.
Inoperative table does not apply to LNAV Cats. A and B.
For inoperative MALSR increase LPV all Cats. visibility to 2¾.

MALSR

MISSED APPROACH: Climb to 13000 direct ZEXUT and via 158° track to MARRI and hold.

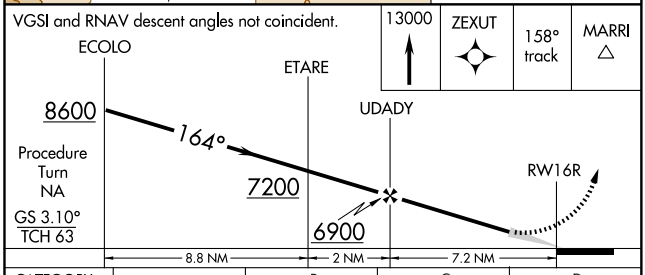
ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





MIRL Rwy 7-25
REIL Rwys 7, 16L, 25, and 34R
HIRL Rwys 16R-34L and 16L-34R

VGSI and RNAV descent angles not coincident.



CATEGORY	A	B	C	D
LPV DA	5239-2¼ 824 (900-2¼)			
LNAV MDA	6200/60 1785 (1800-1¼)	6200-1½ 1785 (1800-1½)	6200-3 1785 (1800-3)	
CIRCLING	6200-1¼ 1785 (1800-1¼)	6200-1½ 1785 (1800-1½)	6200-3 1785 (1800-3)	

WAAS CH 82609 W34A	APP CRS 344°	Rwy ldg 10012 TDZE 4410 Apt Elev 4415

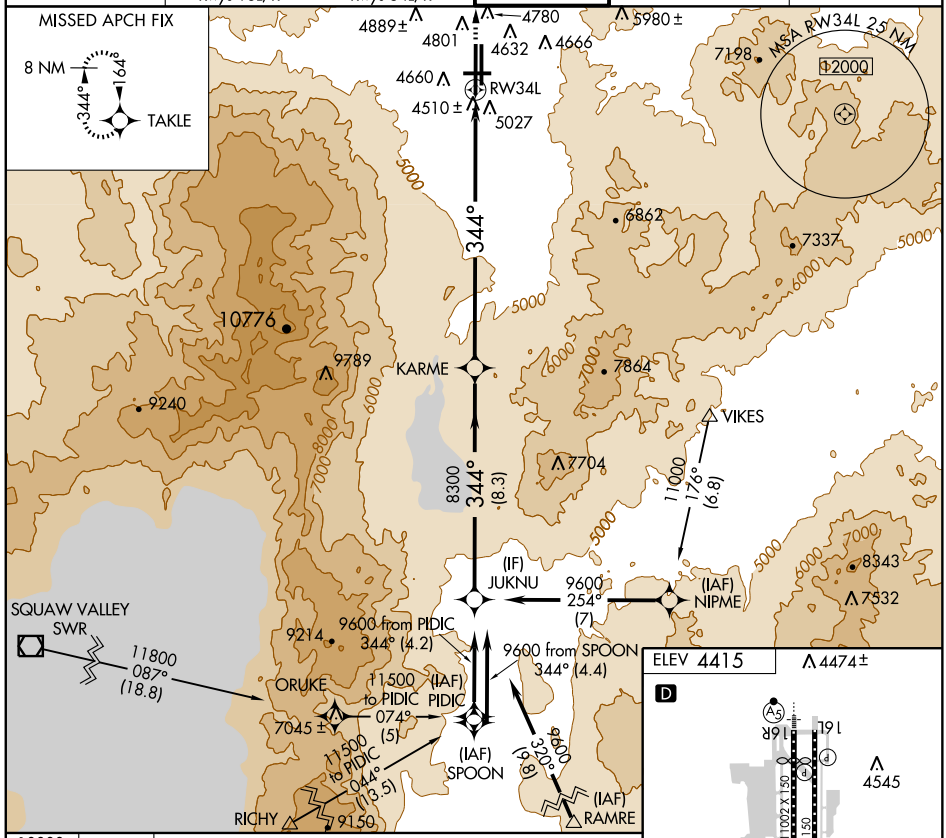
RNAV (GPS) Y RWY 34L

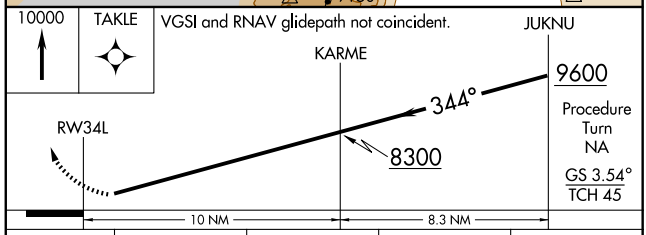
RENO/TAHOE INTL (RNO)

Circling to Rwy 7, 25 NA at night. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA. Circling requires descent on glidepath to CMDA. For inoperative MALSR increase LPV all Cats visibility ½ mile.

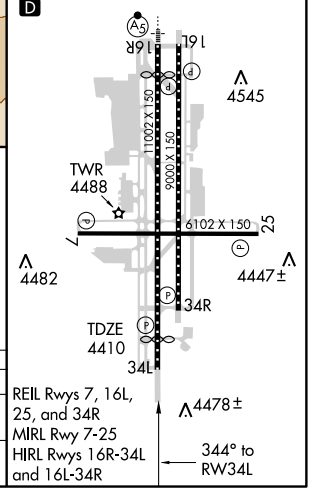
MISSED APPROACH: Climb to 10000 direct TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





CATEGORY	A	B	C	D
LPV DA	5018-1¼ 608 (700-1¼)			NA
CIRCLING	5340-1¾ 925 (1000-1¾)		5340-3 925 (1000-3)	NA



WAAS CH 40409 W34B	APP CRS 344°	Rwy ldg 9000 TDZE 4408 Apt Elev 4415

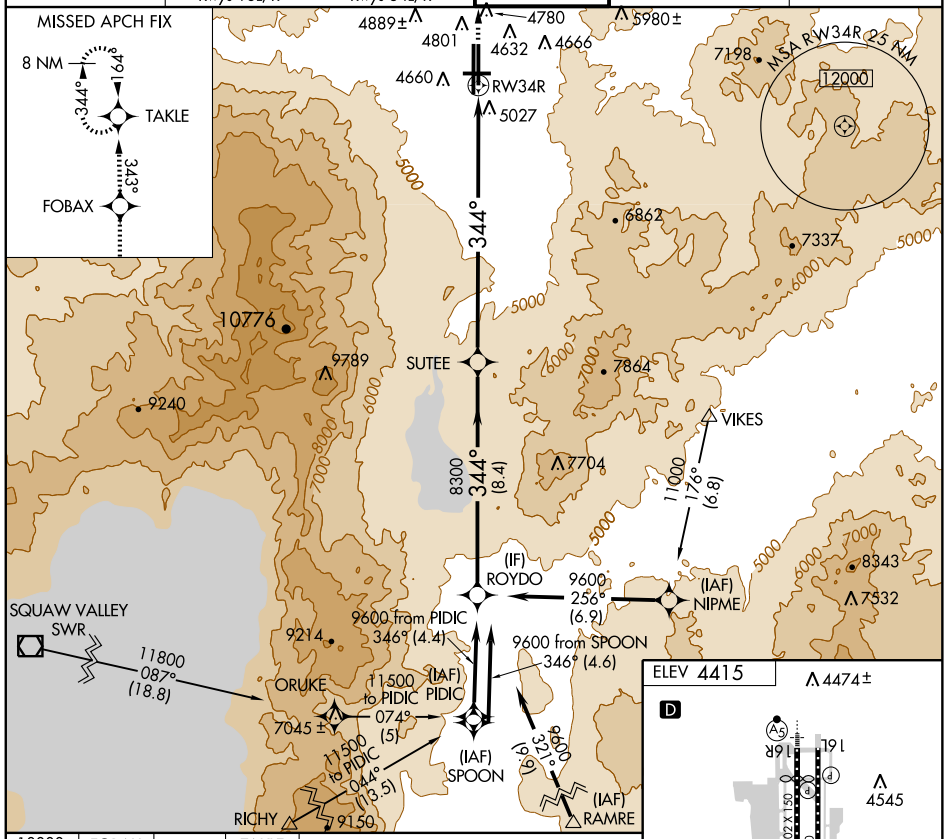
RNAV (GPS) Y RWY 34R

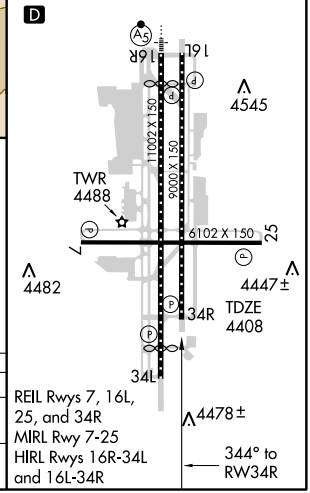
RENO/TAHOE INTL (RNO)

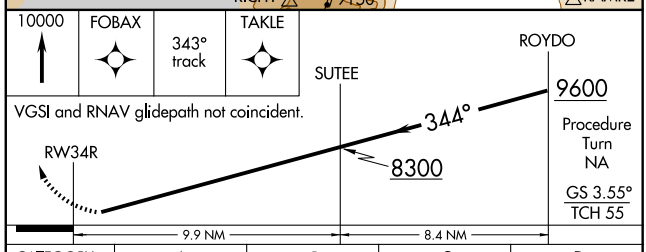
Circling to Rwy 7, 25 NA at night. DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.
Circling requires descent on glidepath to CMDA.

MISSED APPROACH: Climb to 10000 direct FOBAX and via 343° track to TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85







CATEGORY	A	B	C	D
LPV DA	5043-2 635 (700-2)			NA
CIRCLING	5340-2 925 (1000-2)		5340-2¾ 925 (1000-2¾)	NA

APP CRS	Rwy ldg	9000
164°	TDZE	4415
	Apt Elev	4415

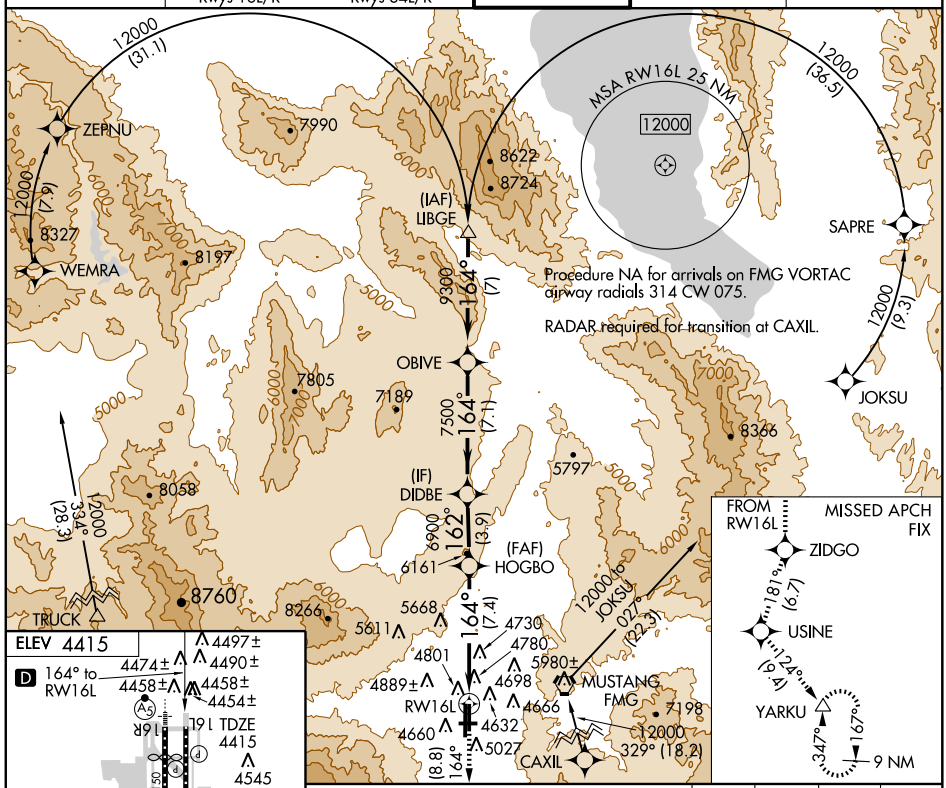
RNAV (RNP) Z RWY 16L

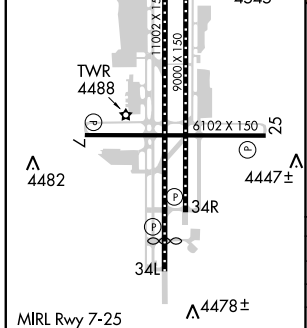
RENO/TAHOE INTL (RNO)

RF and GPS required. For uncompensated Baro-VNAV systems, procedure NA below -13°C (7°F) or above 54°C (130°F).
* Missed approach requires minimum climb of 260 feet per NM to 7300. Visibility reduction by helicopters NA. When VGSI inoperative, procedure NA at night.

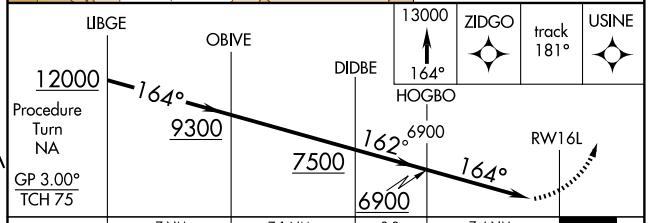
MISSED APPROACH: Climb to 13000 via track 164° to ZIDGO and via track 181° to USINE and via track 124° to YARKU and hold, continue climb-in-hold to 13000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





MIRL Rwy 7-25
REIL Rwys 7, 16L, 25, and 34R
HIRL Rwys 16R-34L and 16L-34R



CATEGORY	A	B	C	D
RNP 0.12 DA*	4794-1¼	379 (400-1¼)		NA
RNP 0.30 DA	5126-2½	711 (800-2½)		NA

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED

SW-4, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	10003
164°	TDZE	4415
	Apt Elev	4415

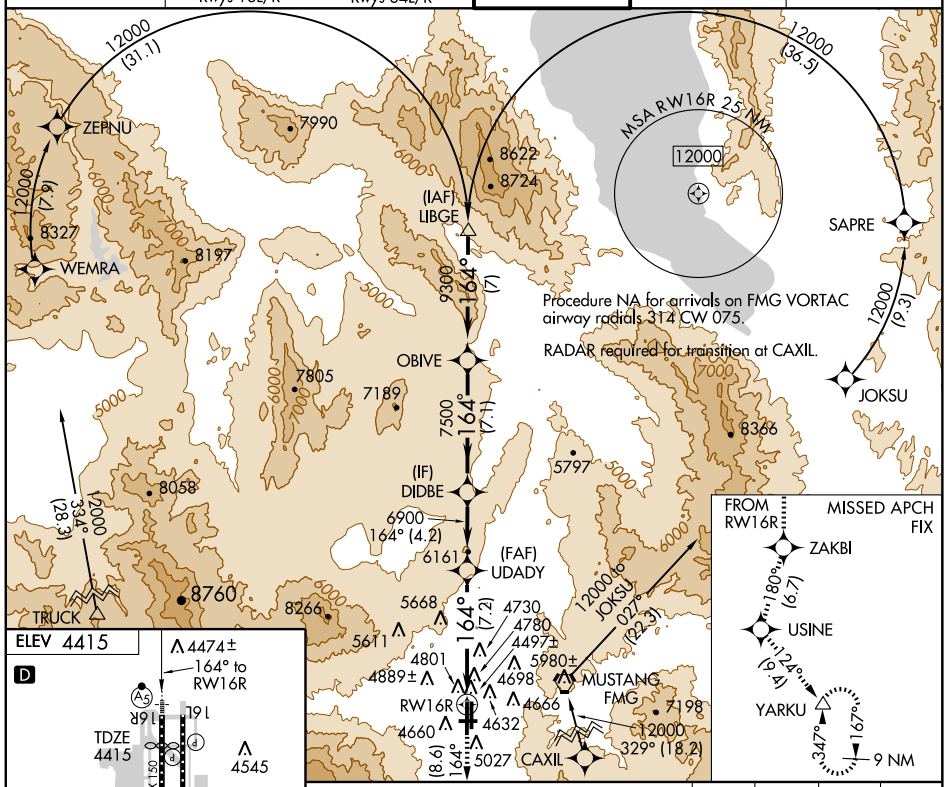
RNAV (RNP) Z RWY 16R
RENO/TAHOE INTL (RNO)

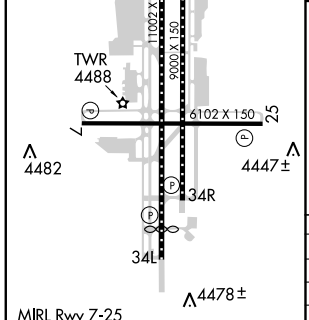
RF and GPS required. For uncompensated Baro-VNAV systems, procedure NA below -13°C (7°F) or above 54°C (130°F).
For inoperative MALSR, increase RNP 0.17* all Cats visibility to RVR 6000 and RNP 0.30 all Cats visibility to 2½ miles.
*Missed approach requires minimum climb of 260 feet per NM to 7300.

MALSR

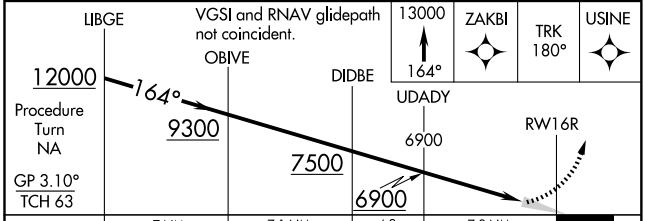
MISSED APPROACH: Climb to 13000 via track 164° to ZAKBI and via track 180° to USINE and via track 124° to YARKU and hold, continue climb-in-hold to 13000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85





MIRL Rwy 7-25
REIL Rwys 7, 16L, 25, and 34R
HIRL Rwys 16R-34L and 16L-34R



CATEGORY	A	B	C	D
RNP 0.17 DA*	4821/40	406 (500-¾)		NA
RNP 0.30 DA	5140-2	725 (800-2)		NA

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED

SW-4, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	10012
344°	TDZE	4410
	Apt Elev	4415

RNAV (RNP) Z RWY 34L

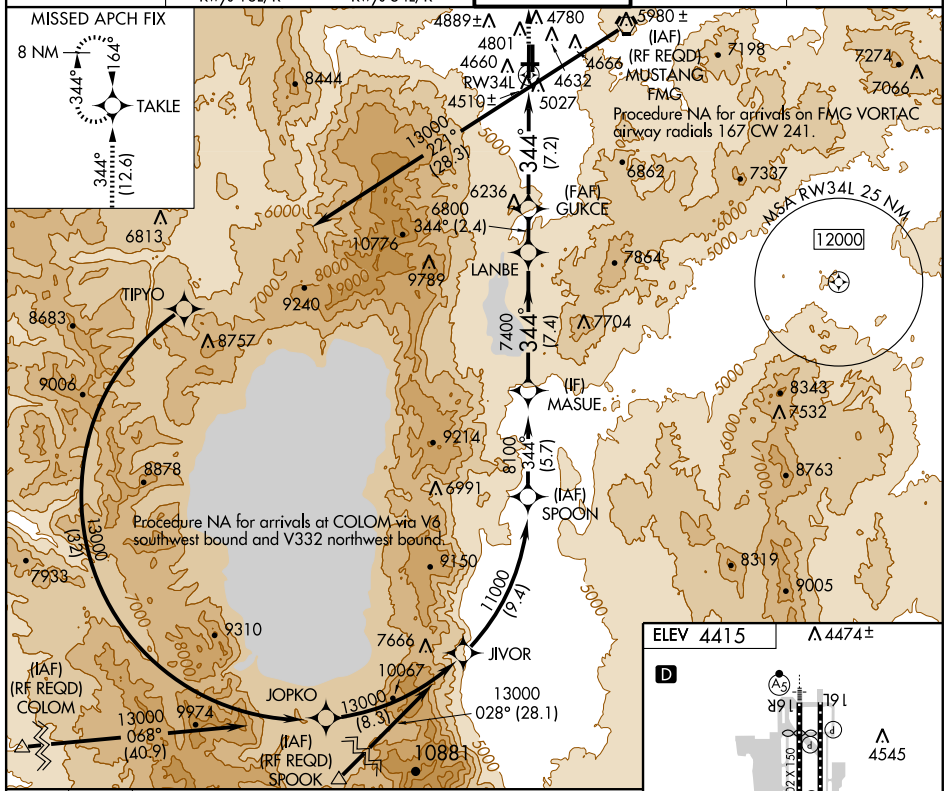
RENO/TAHOE INTL (RNO)

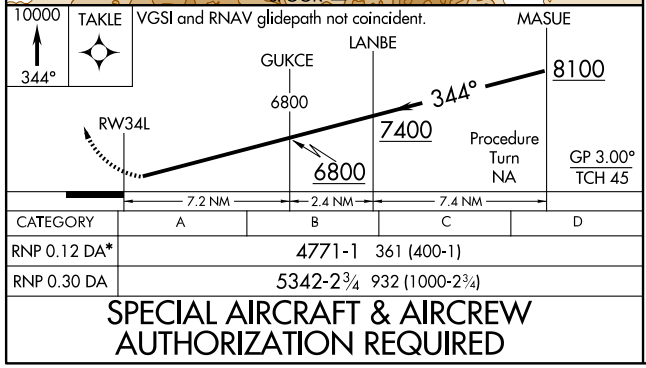
GPS required. Visibility reduction by helicopters NA.
For uncompensated Baro-VNAV systems, procedure NA below -13°C (8°F) or above 40°C (104°F).
For inoperative MALSR increase visibility RNP 0.12 to 1¼ mile and RNP 0.30 to 4 miles.
*Missed approach requires minimum climb of 243 feet per NM to 7200.

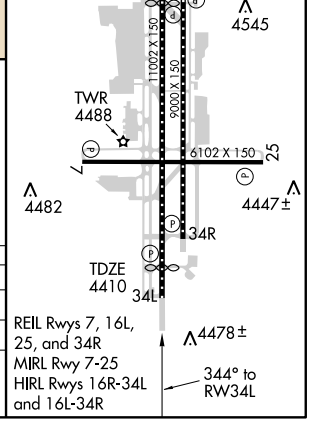
NA

MISSED APPROACH: Climb to 10000 via 344° track to TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9	119.2 279.55	118.7 257.8	121.9 348.6	124.9 370.85
	Rwys 16L/R	Rwys 34L/R			







CATEGORY	A	B	C	D
RNP 0.12 DA*	4771-1 361 (400-1)			
RNP 0.30 DA	5342-2¾ 932 (1000-2¾)			

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED

SW-4, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	9000
344°	TDZE	4408
	Apt Elev	4415

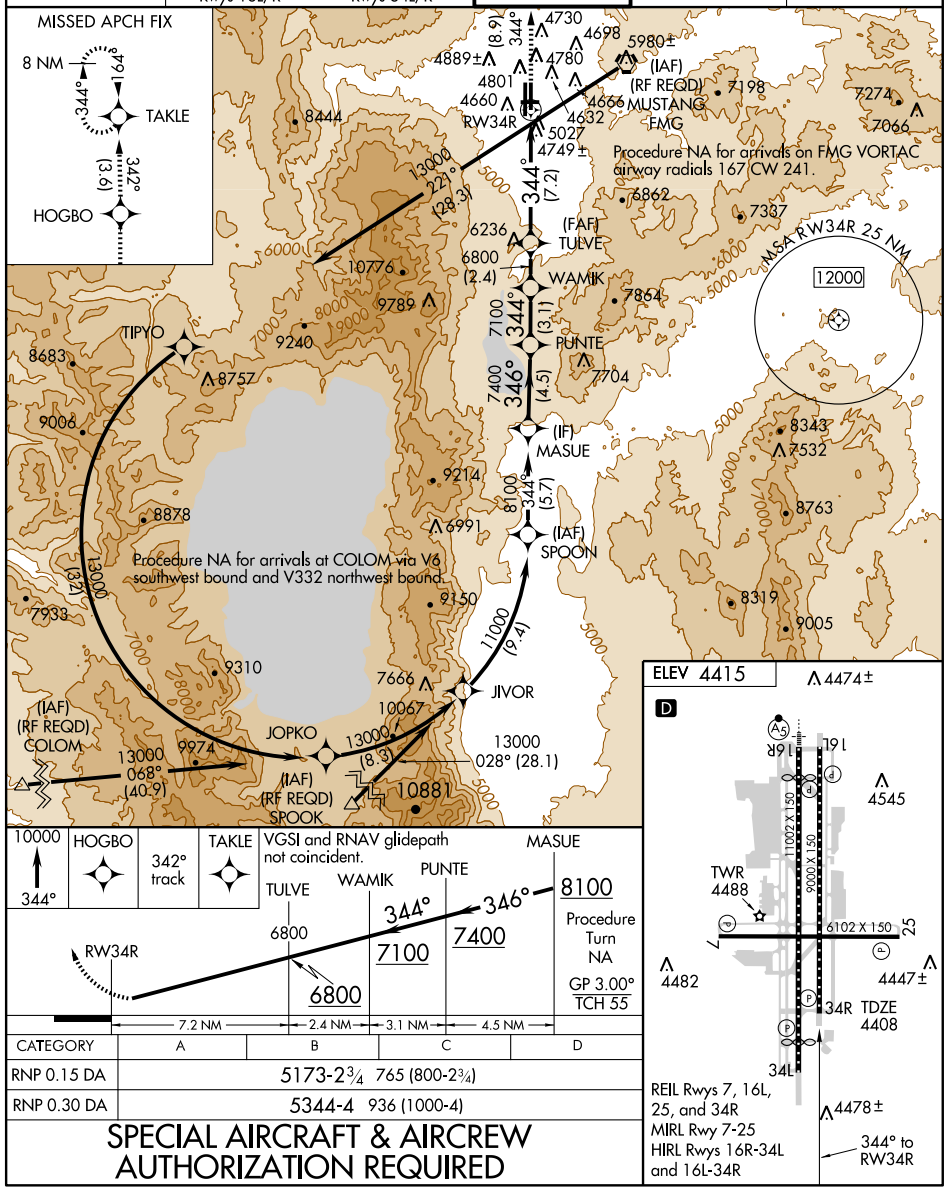
RNAV (RNP) Z RWY 34R
RENO/TAHOE INTL (RNO)

GPS required. Visibility reduction by helicopters NA. For uncompensated Baro-VNAV systems, procedure NA below -13°C (8°F) or above 40°C (105°F).

NA

MISSED APPROACH: Climb to 10000 via 344° track to HOGBO and 342° track to TAKLE and hold, continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85



CATEGORY	A	B	C	D
RNP 0.15 DA	5173-2¾ 765 (800-2¾)			
RNP 0.30 DA	5344-4 936 (1000-4)			

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED

SW-4, 14 JAN 2010 to 11 FEB 2010

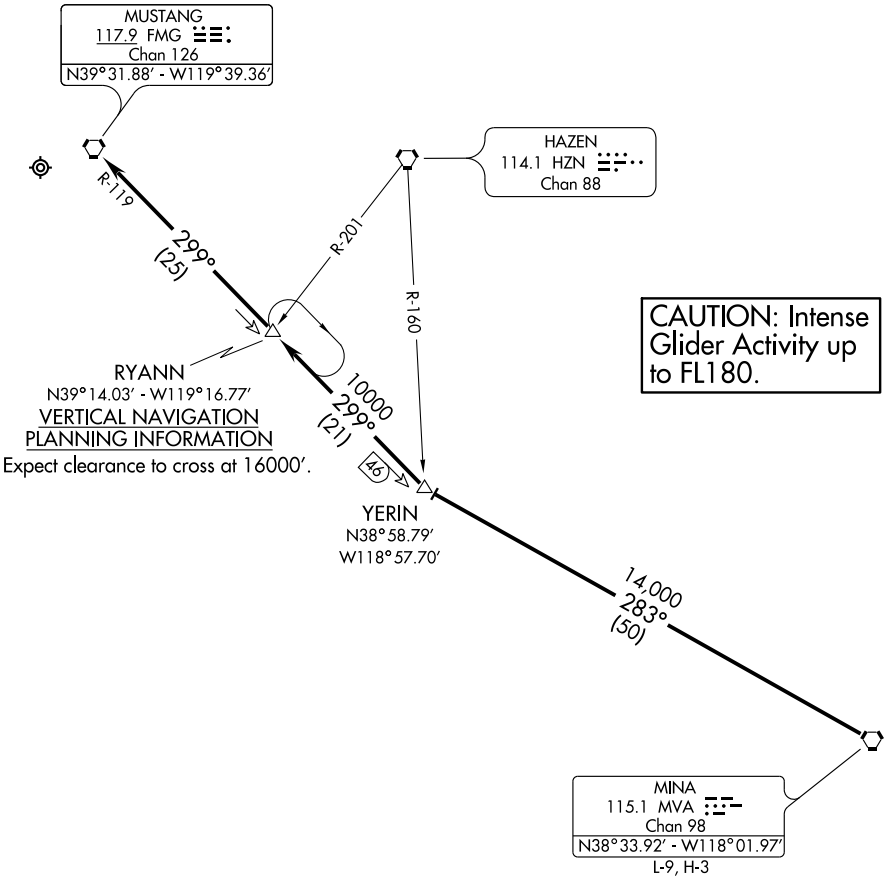
(MVA.RYANN1) 08325

RYANN ONE ARRIVAL

ST-346 (FAA)

RENO/TAHOE INTL
RENO, NEVADA

RENO APP CON
RWYS 16L/R 126.3 353.9
RWYS 34L/R 119.2 279.55
ATIS 135.8 363.0



NOTE: For Runway 16 only.

NOTE: RADAR Required.

NOTE: Chart not to scale.

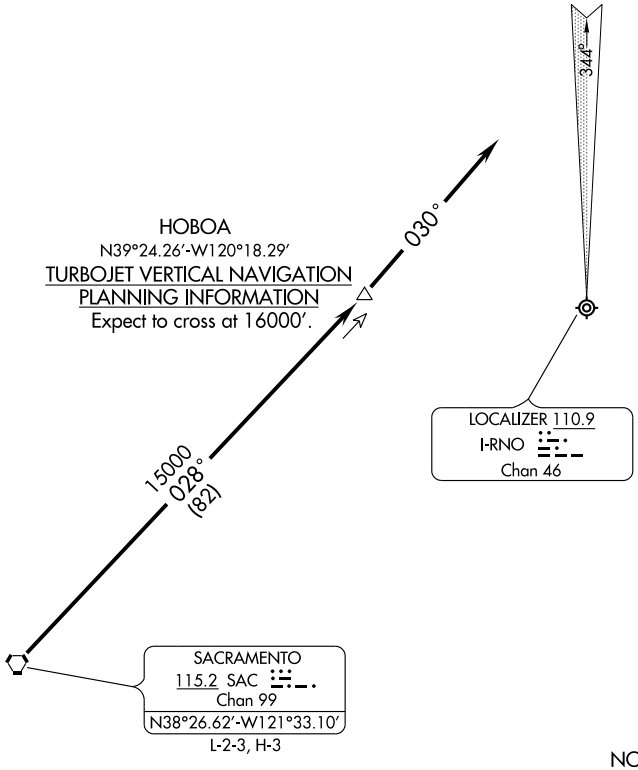
RUNWAY 16: From over MVA VORTAC via MVA R-283 to YERIN INT. Thence via FMG R-119 to FMG VORTAC. Expect radar vectors to Runway 16.

SW-4, 14 JAN 2010 to 11 FEB 2010

SIERRA THREE ARRIVAL

RENO APP CON
RWY 16L/R 126.3 353.9
RWY 34L/R 119.2 279.55
ATIS 135.8 363.0

CAUTION: Intense Glider Activity up to FL180.



NOTE: RADAR required.
NOTE: DME required.
NOTE: Chart not to scale.

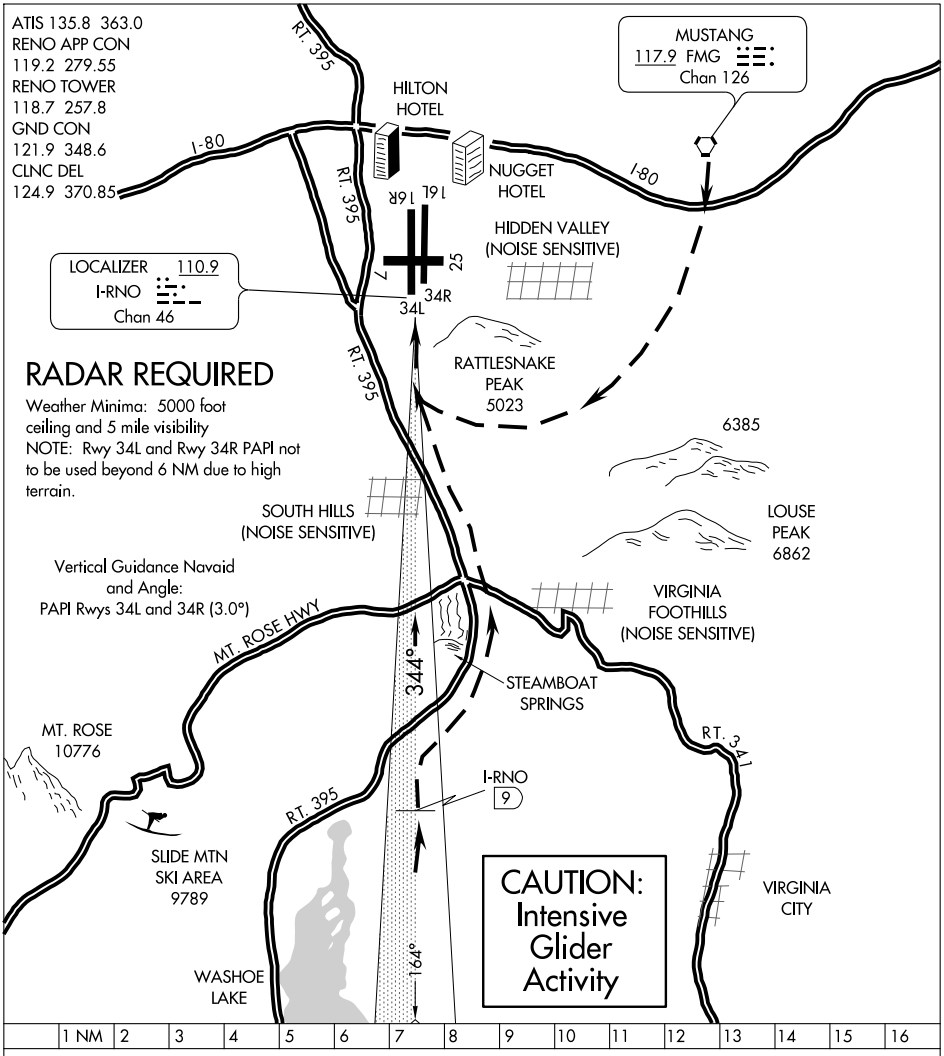
From over SAC VORTAC via SAC R-028 to HOBOA INT/SAC 82 DME. Depart HOBOA heading 030° for vectors to final approach.

SW-4, 14 JAN 2010 to 11 FEB 2010

SOUTH HILLS VISUAL RWY 34L/R

AL-346 (FAA)

RENO/TAHOE INTL (RNO)
RENO, NEVADA

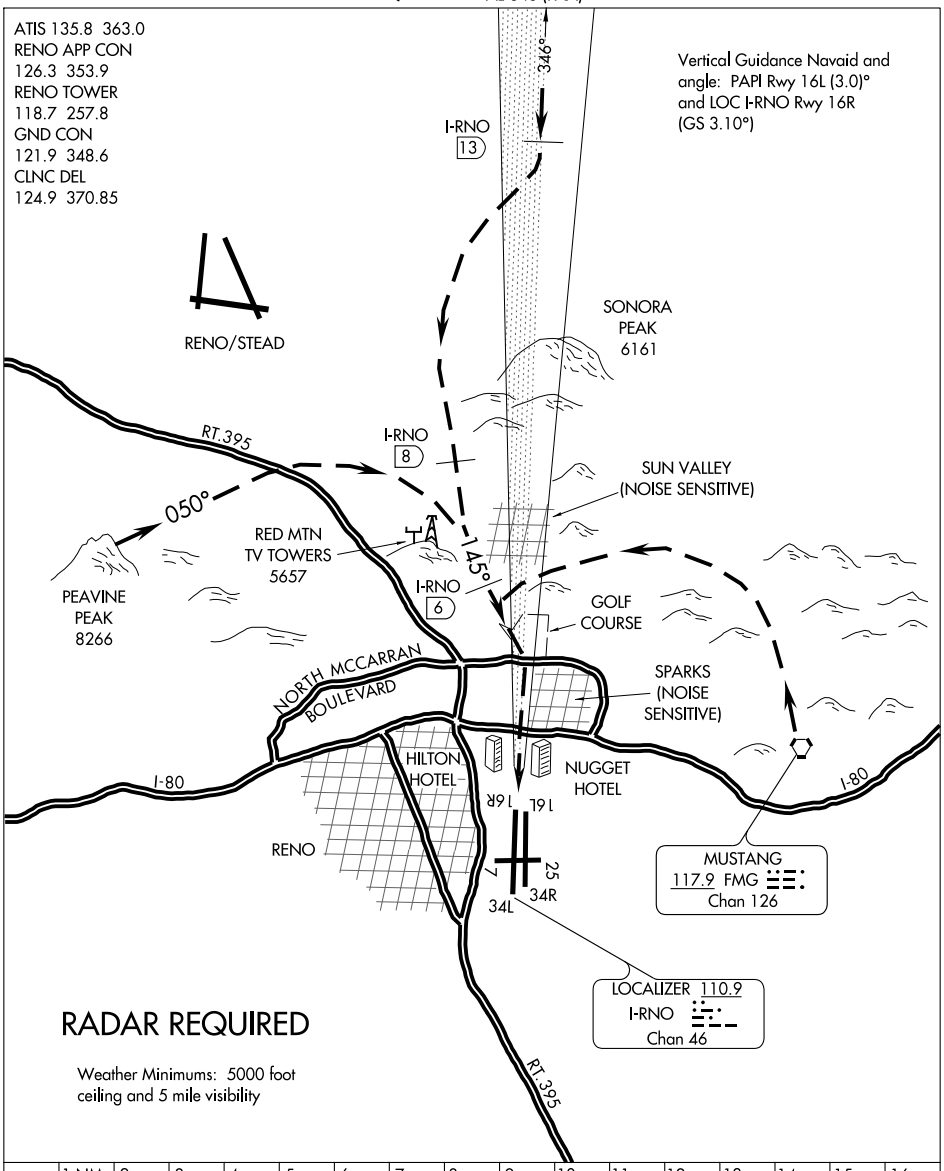


SOUTH HILLS VISUAL APPROACH RUNWAY 34L/R
PROCEDURE NOT AUTHORIZED AT NIGHT

When visual approaches to Runways 34L/R are in progress, clearances to aircraft will be given utilizing the following phraseology:
"(IDENT) CLEARED FOR SOUTH HILLS VISUAL RUNWAY 34 LEFT/RIGHT APPROACH."

SPARKS VISUAL RWY 16L/R

RENO/TAHOE INTL (RNO)
RENO, NEVADA



SPARKS VISUAL APPROACH RWY 16L/R

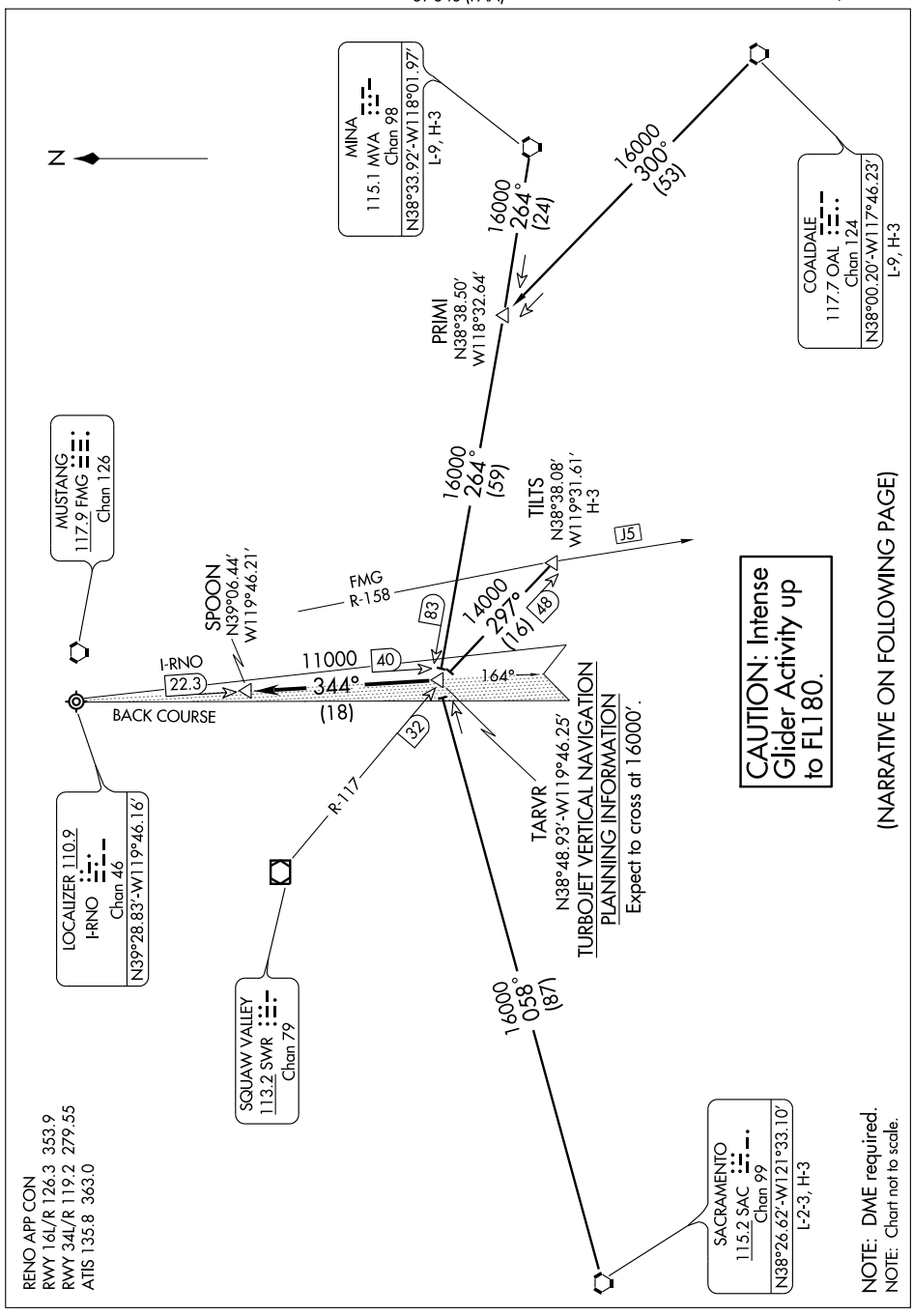
PROCEDURE NOT AUTHORIZED AT NIGHT

When visual approaches to Runways 16L/R are in progress clearances to aircraft will be given utilizing the following phraseology:
(IDENT) CLEARED FOR SPARKS VISUAL RUNWAY 16 LEFT/RIGHT APPROACH

TARVR ONE ARRIVAL

ST-346 (FAA)

RENO/TAHOE INTL
RENO, NEVADA

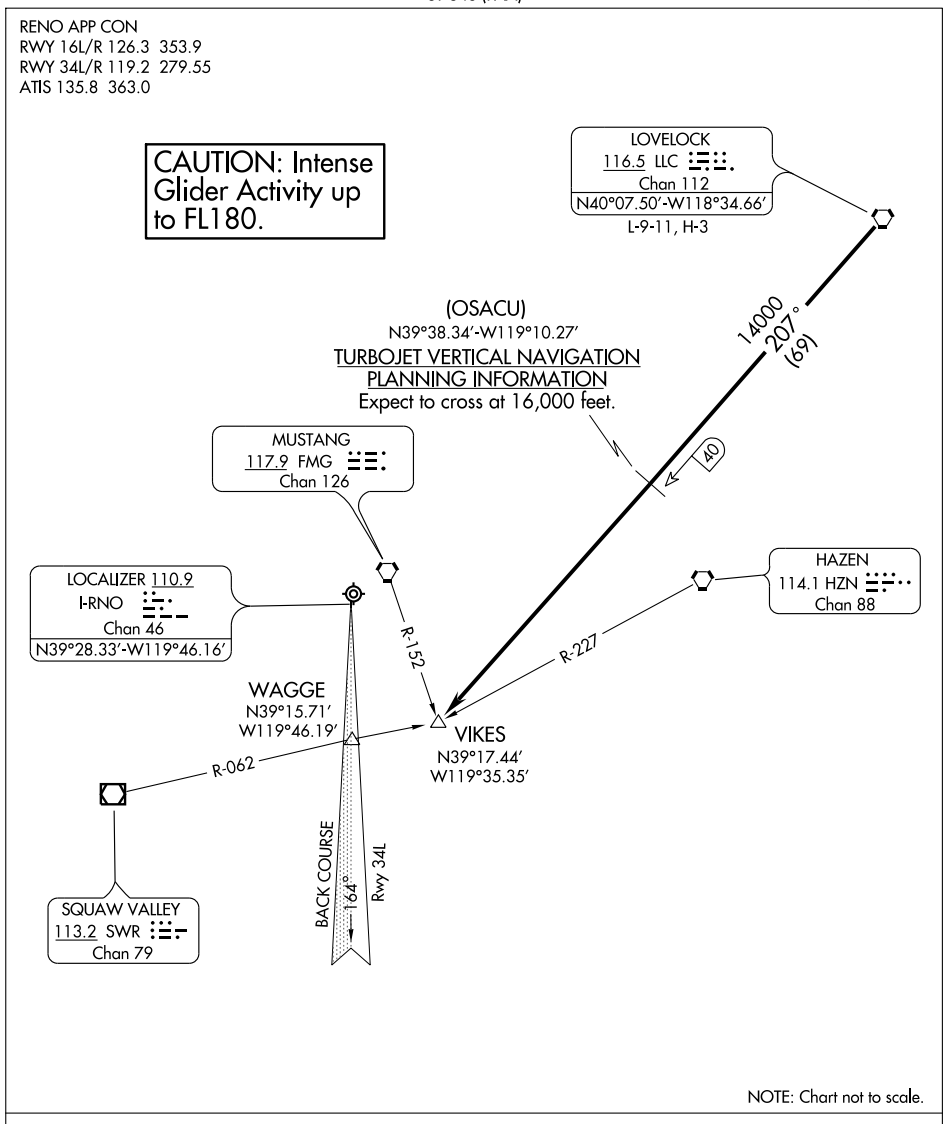


ARRIVAL ROUTE DESCRIPTION

COALDALE TRANSITION (OAL.TARVR1): From over OAL VORTAC via the OAL R-300 and the MVA R-264 to TARVR INT/DME. Thence....
MINA TRANSITION (MVA.TARVR1): From over the MVA VORTAC via MVA R-264 to TARVR INT/DME. Thence....
SACRAMENTO TRANSITION (SAC.TARVR1): From over SAC VORTAC via SAC R-058 to TARVR INT/DME. Thence....
TILTS TRANSITION (TILTS.TARVR1): From over TILTS INT/DME via SWR R-117 to TARVR INT/DME. Thence....
....From over TARVR INT/DME via I-RNO back course to SPOON I-RNO 22.3 DME.

VIKES ONE ARRIVAL

RENO APP CON
RWY 16L/R 126.3 353.9
RWY 34L/R 119.2 279.55
ATIS 135.8 363.0



NOTE: Chart not to scale.

From over LLC VORTAC via LLC R-207 to VIKES INT/DME, then radar vectors to the LOCALIZER BACK COURSE I-RNO.

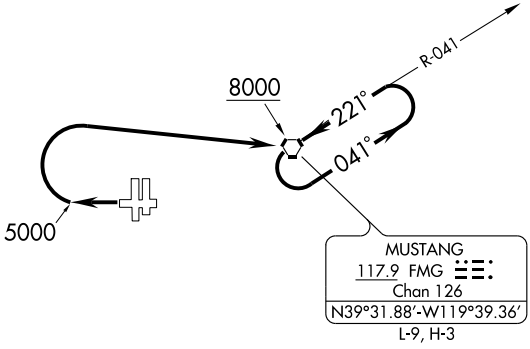
LOST COMMUNICATIONS:
Proceed via the VIKES-WAGGE terminal route and execute the LOC/DME BC RWY 34L approach to Tahoe Intl.

VISTA ONE DEPARTURE

ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8
RENO DEP CON
126.3 353.9

TAKE-OFF OBSTACLE NOTES

Rwy 25: Multiple poles left and right of centerline beginning 500′ from DER, 467′ left of centerline, up to 48′ AGL/4523′ MSL.
Numerous trees left and right of centerline, beginning 1877′ from DER, 31′ left of centerline, up to 40′ AGL/4506′ MSL.
Sign, 1656′ from DER, 422′ left of centerline, up to 31′ AGL/4482′ MSL.



TAKE-OFF MINIMUMS

Rwy 7: NA- obstacles

Rwys 16L, 16R, 34L, 34R: NA- ATC.

Rwy 25: Cat A/B, do not exceed 180 KIAS until FMG VORTAC, standard with a minimum climb of 380′ per NM to 8400, ATC climb of 495′ per NM to 8000.
Cat C/D: NA- Air traffic control.

CAUTION: Intense Glider Activity up to FL180.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 25: Climb to 5000, then climbing right turn to 10000 or assigned altitude direct FMG VORTAC, cross FMG VORTAC at or above 8000. Climb in FMG holding pattern to depart FMG VORTAC at or above MEA/MCA for direction of flight. Expect clearance to requested altitude five minutes after departure.

SW-4, 14 JAN 2010 to 11 FEB 2010

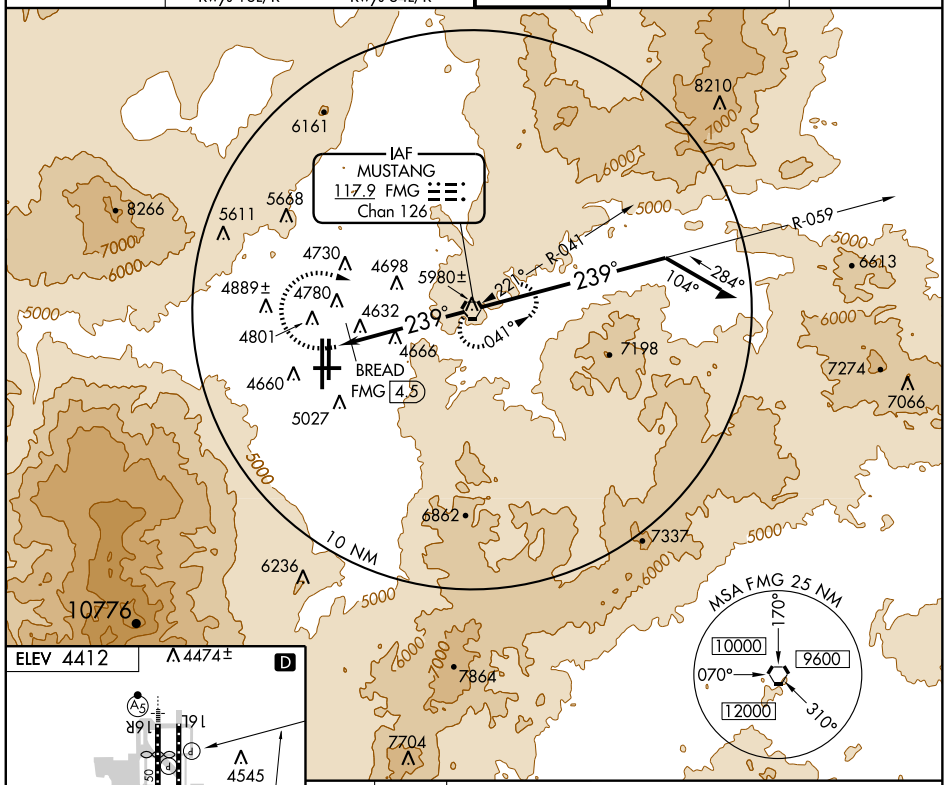
VORTAC FMG 117.9 Chan 126	APP CRS 239°	Rwy ldg N/A TDZE N/A Apt Elev 4412

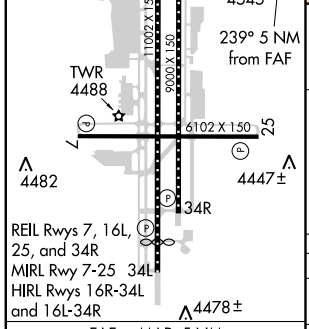
VOR-D

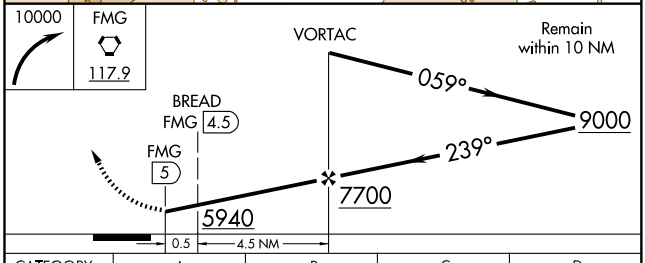
RENO/TAHOE INTL (RNO)

MISSED APPROACH: Climbing right turn to 10000 direct FMG VORTAC and hold. Continue climb-in-hold to 10000.

ATIS	RENO APP CON		RENO TOWER	GND CON	CLNC DEL
135.8 363.0	126.3 353.9 Rwys 16L/R	119.2 279.55 Rwys 34L/R	118.7 257.8	121.9 348.6	124.9 370.85







FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

CATEGORY	A	B	C	D
CIRCLING	5940-1¼ 1528 (1600-1¼)	5940-1½ 1528 (1600-1½)	5940-3 1528 (1600-3)	
BREAD FIX MINIMUMS				
CIRCLING	5800-1¼ 1388 (1400-1¼)	5800-1½ 1388 (1400-1½)	5800-3 1388 (1400-3)	

SW-4, 14 JAN 2010 to 11 FEB 2010

WAGGE TWO DEPARTURE

SL-346 (FAA)

RENO/TAHOE INTL (RNO)
RENO, NEVADA

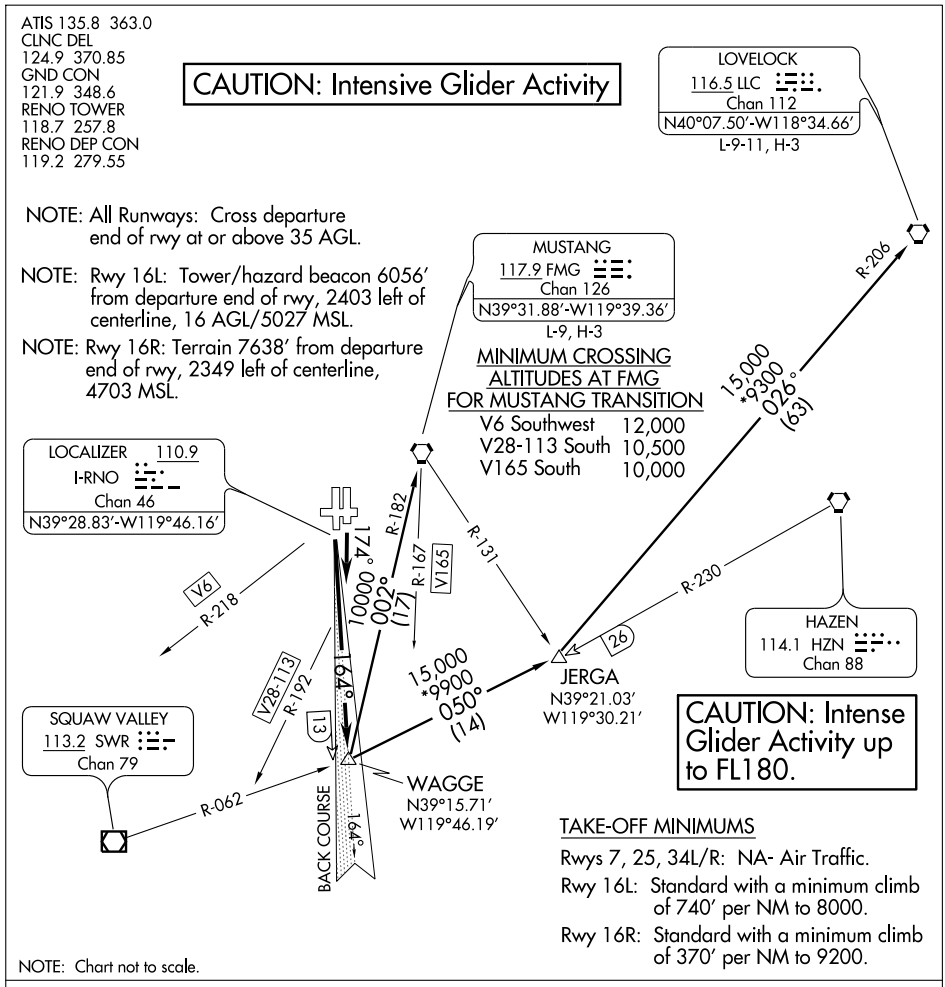
ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8
RENO DEP CON
119.2 279.55

CAUTION: Intensive Glider Activity

NOTE: All Runways: Cross departure end of rwy at or above 35 AGL.

NOTE: Rwy 16L: Tower/hazard beacon 6056′ from departure end of rwy, 2403 left of centerline, 16 AGL/5027 MSL.

NOTE: Rwy 16R: Terrain 7638′ from departure end of rwy, 2349 left of centerline, 4703 MSL.



TAKE-OFF MINIMUMS

Rwys 7, 25, 34L/R: NA- Air Traffic.

Rwy 16L: Standard with a minimum climb of 740′ per NM to 8000.

Rwy 16R: Standard with a minimum climb of 370′ per NM to 9200.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 16L: Climbing right turn heading 174° to intercept I-RNO South course to WAGGE INT, thence via (transition) or (assigned route).

TAKE-OFF RUNWAY 16R: Climb via I-RNO South course to WAGGE INT, thence via (transition) or (assigned route).

All aircraft maintain 15,000 or assigned altitude. Expect clearance to requested altitude five minutes after departure

LOVELOCK TRANSITION (WAGGE2.LLC): From over WAGGE INT via HZN R-230 and LLC R-206 to LLC VORTAC.

MUSTANG TRANSITION (WAGGE2.FMG): From over WAGGE INT via FMG R-182 to FMG VORTAC.

ZEFFR THREE DEPARTURE (RNAV)

SL-346 (FAA)

RENO/TAHOE INTL (RNO)
RENO, NEVADA

ATIS 135.8 363.0
CLNC DEL
124.9 370.85
GND CON
121.9 348.6
RENO TOWER
118.7 257.8
RENO DEP CON
119.2 279.55

TAKE-OFF MINIMUMS

Rwys 7, 25, 34L, 34R: NA - ATC

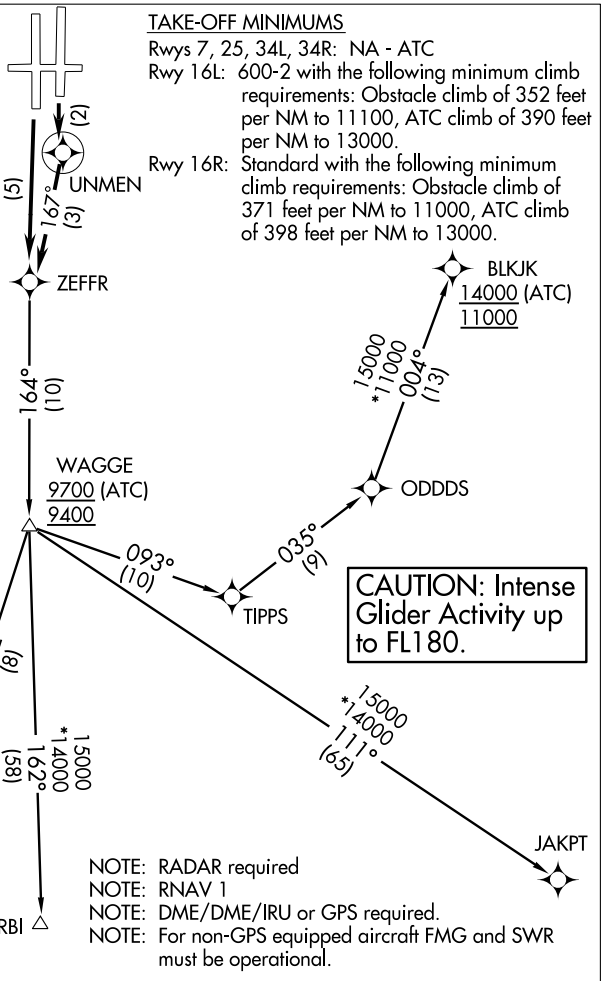
Rwy 16L: 600-2 with the following minimum climb requirements: Obstacle climb of 352 feet per NM to 11100, ATC climb of 390 feet per NM to 13000.

Rwy 16R: Standard with the following minimum climb requirements: Obstacle climb of 371 feet per NM to 11000, ATC climb of 398 feet per NM to 13000.

TAKE-OFF OBSTACLE NOTES

RWY 16L: Antenna, trees, and light poles beginning 618′ from DER, 131′ left of centerline, up to 40′ AGL/ 4449′ MSL.
Terrain beginning 5189′ from DER, 821′ left of centerline, up to 4939′ MSL.

RWY 16R: Multiple trees beginning 746 feet from DER, 380′ left of centerline, up to 49′ AGL/4478′ MSL.
Multiple trees beginning 2783′ from DER, 171′ right of centerline, up to 71′ AGL/4510′ MSL. Ground beginning 1.2 NM from DER, 777′ left of centerline, up to 4703′ MSL.



NOTE: RADAR required
NOTE: RNAV 1
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft FMG and SWR must be operational.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 16L: Climb direct UNMEN, then via 167° track to ZEFFR, Thence...

TAKE-OFF RUNWAY 16R: Climb direct ZEFFR, Thence...

....via (transition) or (assigned route). Maintain 15000. Expect clearance to filed altitude five minutes after departure.

BLKJK TRANSITION (ZEFFR3.BLKJK)

DARBI TRANSITION (ZEFFR3.DARBI)

JAKPT TRANSITION (ZEFFR3.JAKPT)

MRLET TRANSITION (ZEFFR3.MRLET)

LOC/DME I-RTS	APP CRS	Rwy ldg	7800
111.9	318°	TDZE	5045
Chan 56		Apt Elev	5050

ILS or LOC/DME RWY 32

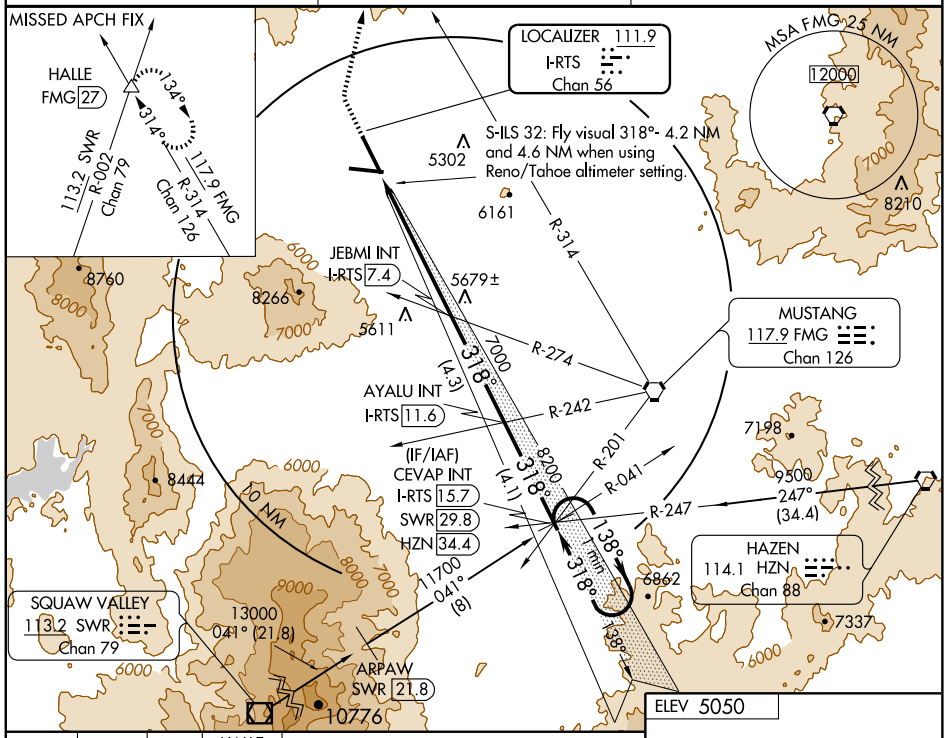
RENO/STEAD (RTS)

NA

Inoperative table does not apply. Procedure NA at night. When local altimeter setting not received, use Reno/Tahoe Intl altimeter setting and increase all DA/MDA 120 feet. VDP NA when using Reno/Tahoe Intl altimeter setting.

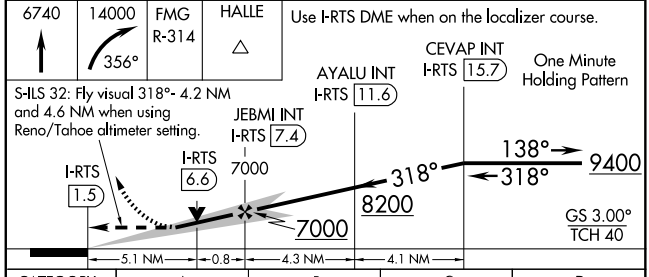
MISSED APPROACH: Climb to 6740 then climbing right turn to 14000 via heading 356° and FMG VORTAC R-314 to HALLEINT/FMG 27 DME and hold, continue climb-in-hold to 14000.

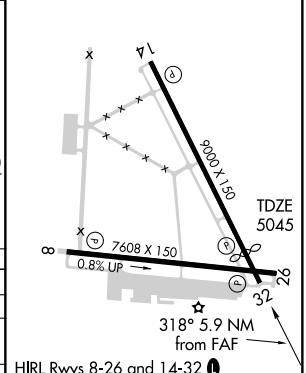
AWOS-A	RENO APP CON	UNICOM
135.175	126.3 353.9	122.7 (CTAF) L



6740	14000	FMG R-314	HALLE
	356°		

Use I-RTS DME when on the localizer course.





HIRL Rwys 8-26 and 14-32 L

REIL Rwys 8, 26, 14 and 32

CATEGORY	A	B	C	D
S-ILS 32	6425-3 1380 (1400-3)			
S-LOC 32	6720-1¼ 1675 (1700-1¼)	6720-1½ 1675 (1700-1½)	6720-3 1675 (1700-3)	
CIRCLING	6720-1¼ 1670 (1700-1¼)	6720-1½ 1670 (1700-1½)	6720-3 1670 (1700-3)	

SW-4, 14 JAN 2010 to 11 FEB 2010

WAAS CH 60920 W32A	APP CRS 318°	Rwy ldg 7800 TDZE 5045 Apt Elev 5050

RNAV (GPS) RWY 32

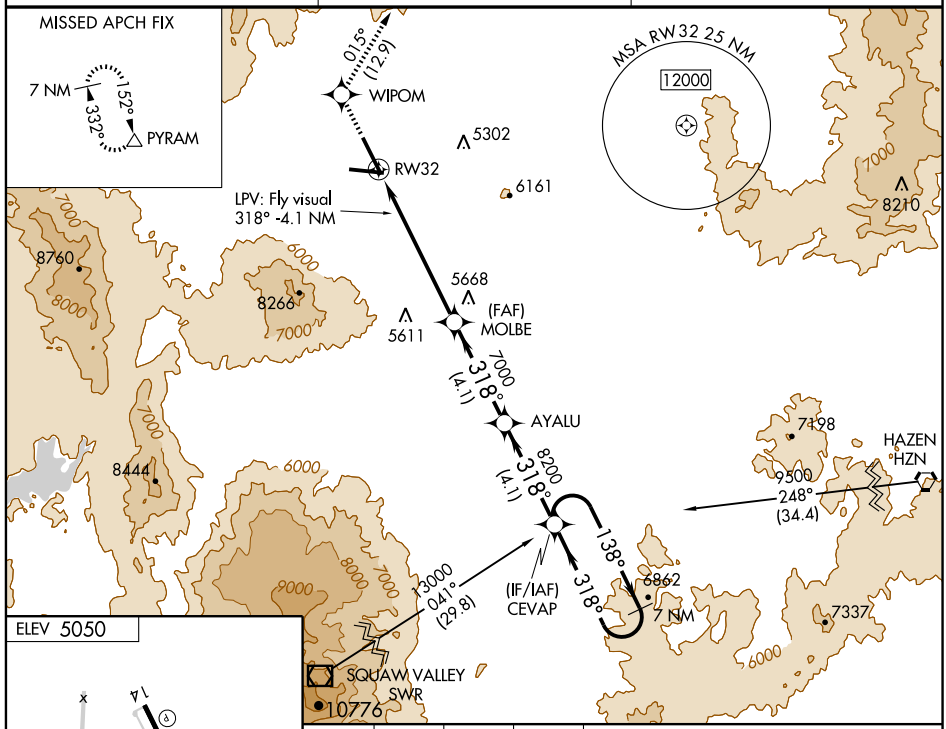
RENO/STEAD (RTS)

T
NA

DME/DME RNP-0.3 NA.
If local altimeter setting not received, use Reno/Tahoe Intl altimeter setting and increase all DAs/MDAs 120 feet.
VDP NA when using Reno/Tahoe Intl altimeter setting.
When VGSI inoperative, circling Rwy 8 NA at night.

MISSED APPROACH: Climb to 11000 direct WIPOM and via 015° track to PYRAM and hold, continue climb-in-hold to 11000.

AWOS-A	RENO APP CON	UNICOM
135.175	126.3 353.9	122.7 (CTAF) L



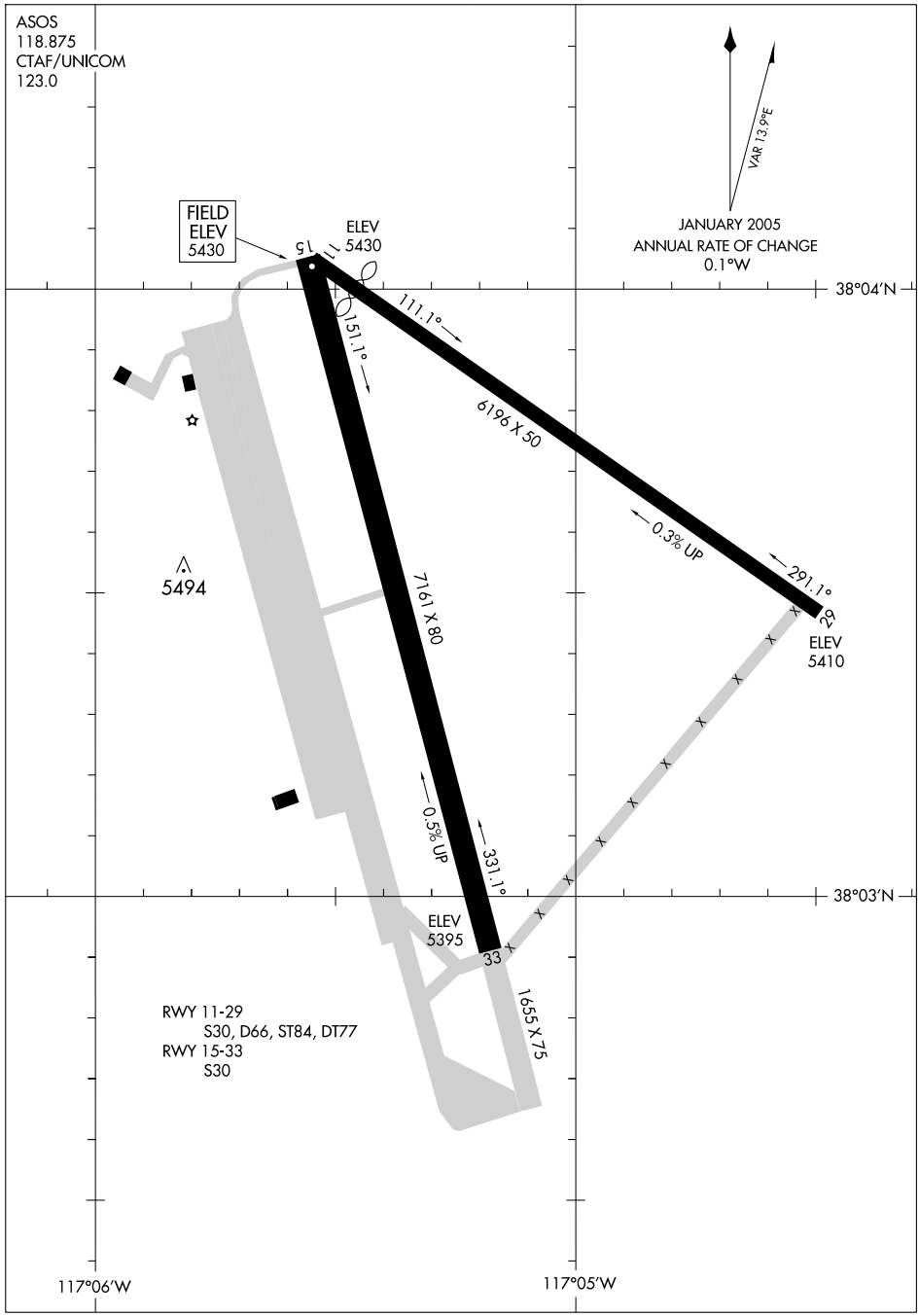
CATEGORY	A	B	C	D
LPV DA	6390-2 1345 (1400-2)		6390-3 1345 (1400-3)	
LNAV/VNAV DA	NA			
LNAV MDA	6700-1¼ 1655 (1700-1¼)	6700-1½ 1655 (1700-1½)	6700-3 1655 (1700-3)	
CIRCLING	6700-5 1650 (1700-5)			

HIRL Rwys 8-26 and 14-32 L
REIL Rwys 8, 26, 14 and 32

AIRPORT DIAGRAM

AL-423 (FAA)

TONOPAH (TPH)
TONOPAH, NEVADA



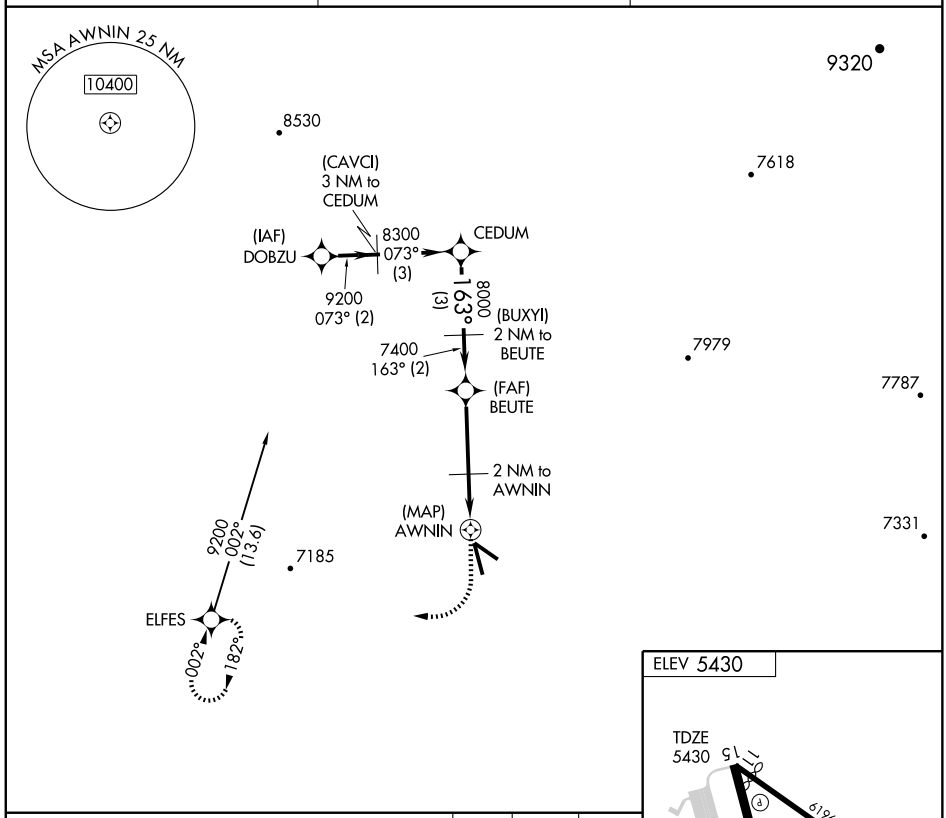
APP CRS	Rwy ldg	7161
163°	TDZE	5430
	Apt Elev	5430

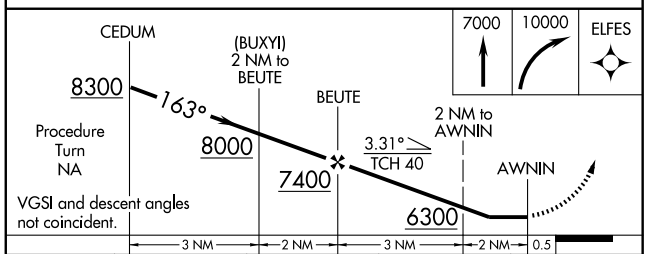
GPS RWY 15
TONOPAH (TPH)

NA

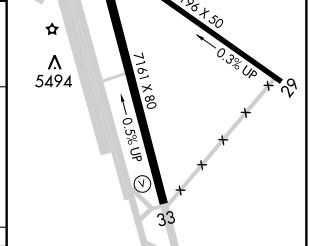
MISSED APPROACH: Climb to 7000 then climbing right turn to 10000 direct ELFES WP and hold.

ASOS	SALT LAKE CITY CENTER	UNICOM
118.875	133.45 317.625	123.0 (CTAF) L





CATEGORY	A	B	C	D
S-15	5820-1 390 (400-1)			5820-1¼ 390 (400-1¼)
CIRCLING	5820-1 390 (400-1)	5880-1 450 (500-1)	5880-1½ 450 (500-1½)	6040-2 610 (700-2)



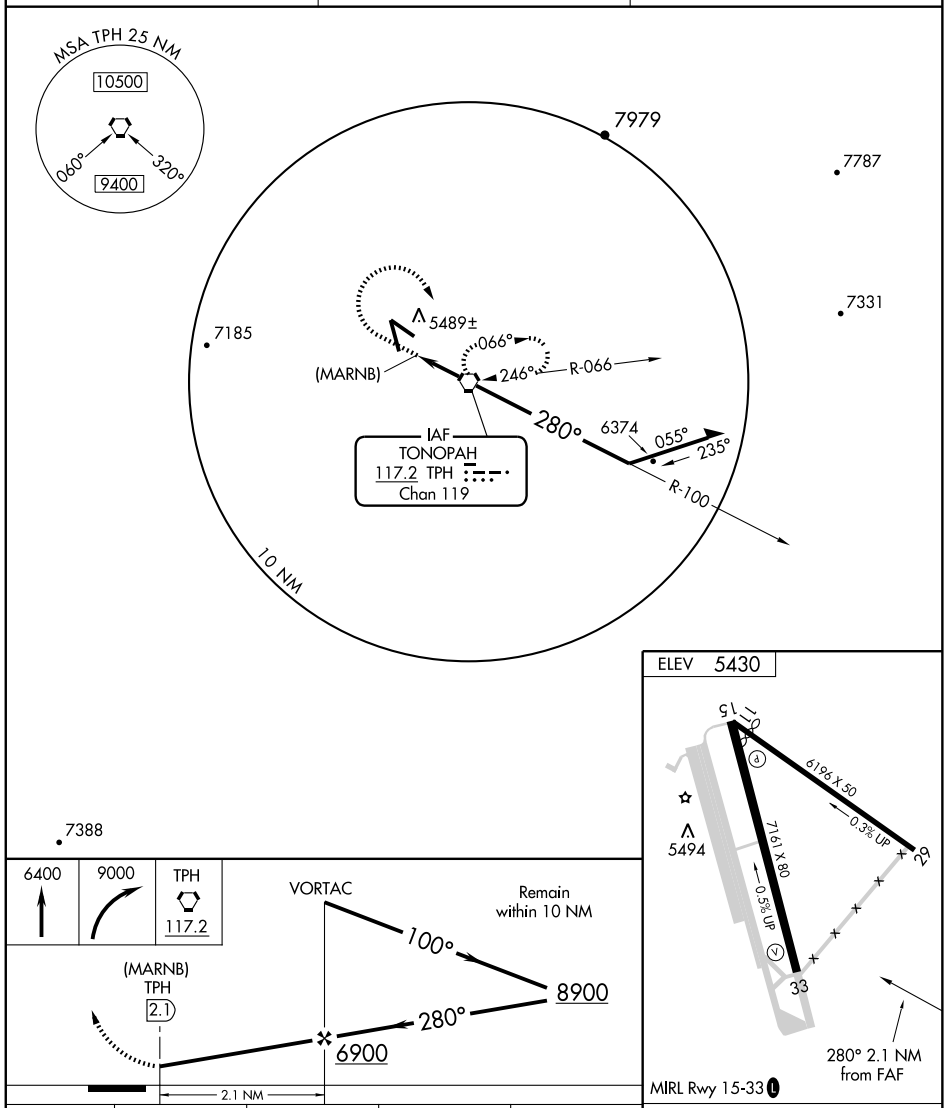
MIRL Rwy 15-33 L

VORTAC TPH 117.2 Chan 119	APP CRS 280°	Rwy ldg N/A TDZE N/A Apt Elev 5430

VOR or GPS-A
TONOPAH (TPH)

MISSED APPROACH: Climb to 6400 then climbing right turn to 9000 direct TPH VORTAC and hold.

ASOS	SALT LAKE CITY CENTER	UNICOM
118.875	133.45 317.625	123.0 (CTAF) L



CATEGORY	A	B	C	D
CIRCLING	6100-1 670 (700-1)		6100-2 670 (700-2)	6100-2¼ 670 (700-2¼)

FAF to MAP 2.1 NM					
Knots	60	90	120	150	180
Min:Sec	2:06	1:24	1:03	0:50	0:42

SW-4. 14 JAN 2010 to 11 FEB 2010

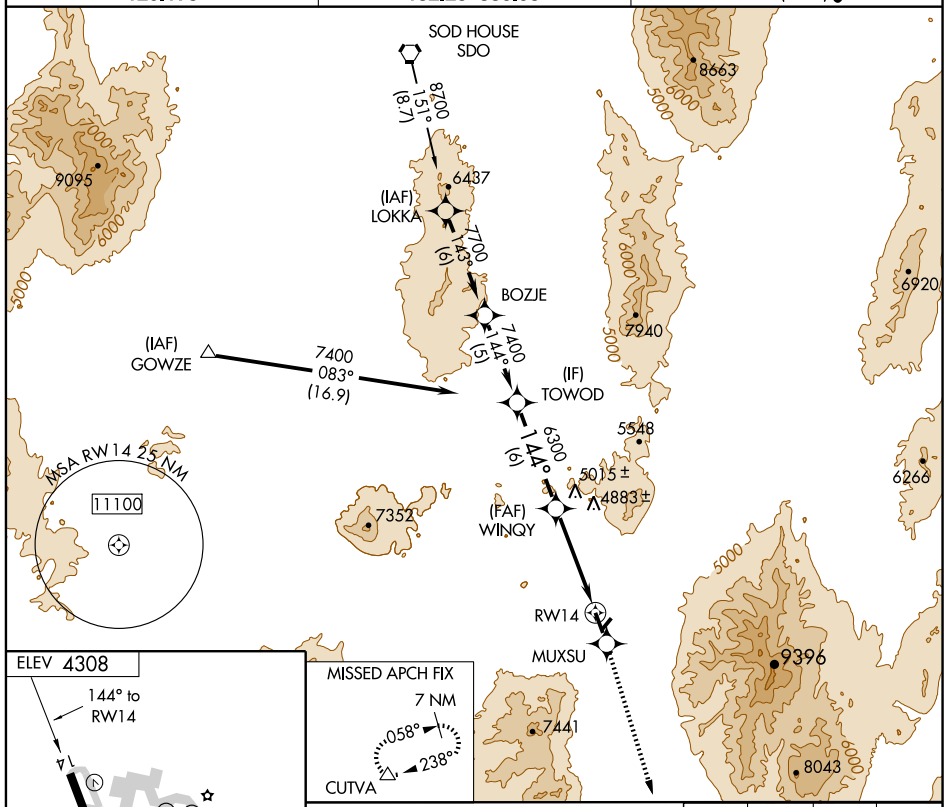
WAAS CH 62902 W14A	APP CRS 144°	Rwy ldg 7000 TDZE 4304 Apt Elev 4308

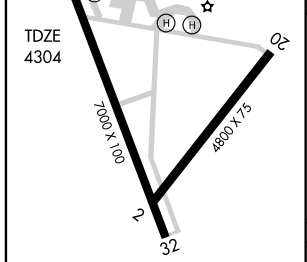
RNAV (GPS) RWY 14
WINNEMUCCA MUNI (WMC)

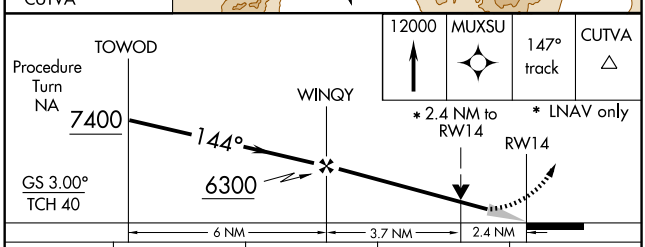
If local altimeter setting not received, use Battle Mountain altimeter setting and increase all DAs/MDAs 140 feet.
DME/DME RNP-0.3 NA.
VDP NA when using Battle Mountain altimeter setting.

MISSED APPROACH: Climb to 12000 direct MUXSU and via 147° track to CUTVA and hold, continue climb-in-hold to 12000.

ASOS	SALT LAKE CITY CENTER	UNICOM
120.175	132.25 380.05	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	4843-2 539 (600-2)			
LNAV MDA	5100-1 796 (800-1)	5100-1¼ 796 (800-1¼)	5100-2¼ 796 (800-2¼)	5100-2½ 796 (800-2½)
CIRCLING	5100-2 792 (800-2)		5100-2¼ 792 (800-2¼)	5100-2½ 792 (800-2½)

MIRL Rwy 2-20
MIRL Rwy 14-32 L

SW-4, 14 JAN 2010 to 11 FEB 2010

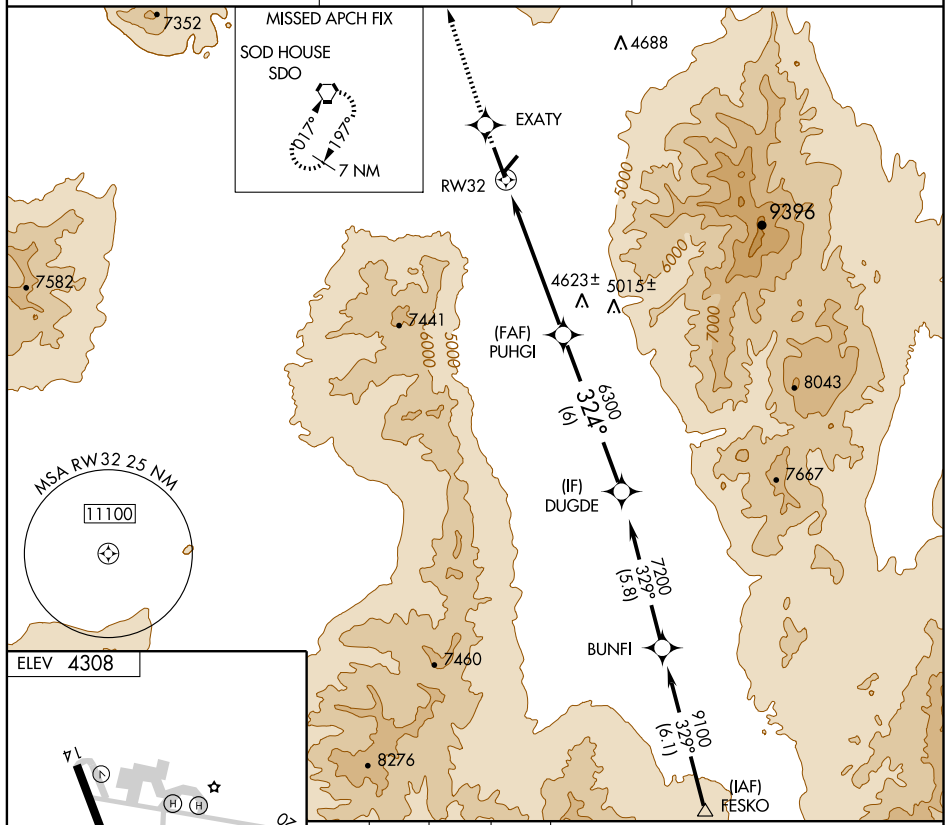
WAAS CH 72702 W32A	APP CRS 324°	Rwy ldg 7000 TDZE 4304 Apt Elev 4308

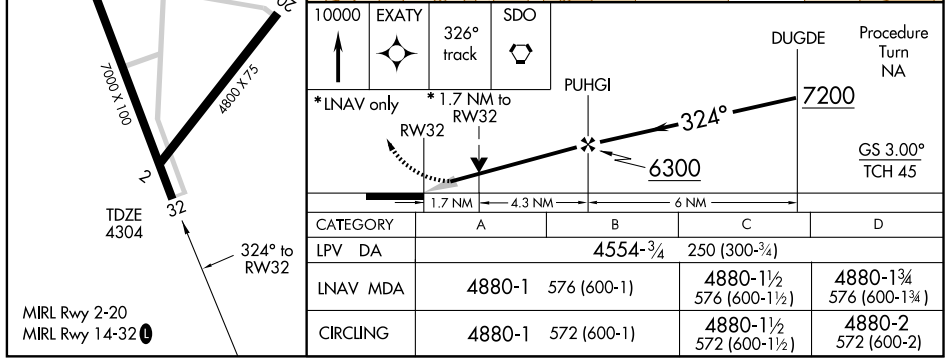
RNAV (GPS) RWY 32
WINNEMUCCA MUNI (WMC)

If local altimeter setting not received, use Battle Mountain altimeter setting and increase all DAs/MDAs 140 feet.
DME/DME RNP-0.3 NA.
VDP NA when using Battle Mountain altimeter setting.

MISSED APPROACH: Climb to 10000 direct EXATY and via 326° track to SDO VORTAC and hold.

ASOS	SALT LAKE CITY CENTER	UNICOM
120.175	132.25 380.05	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	4554-¾ 250 (300-¾)			
LNAV MDA	4880-1 576 (600-1)		4880-1½ 576 (600-1½)	4880-1¾ 576 (600-1¾)
CIRCLING	4880-1 572 (600-1)		4880-1½ 572 (600-1½)	4880-2 572 (600-2)

SW-4, 14 JAN 2010 to 11 FEB 2010

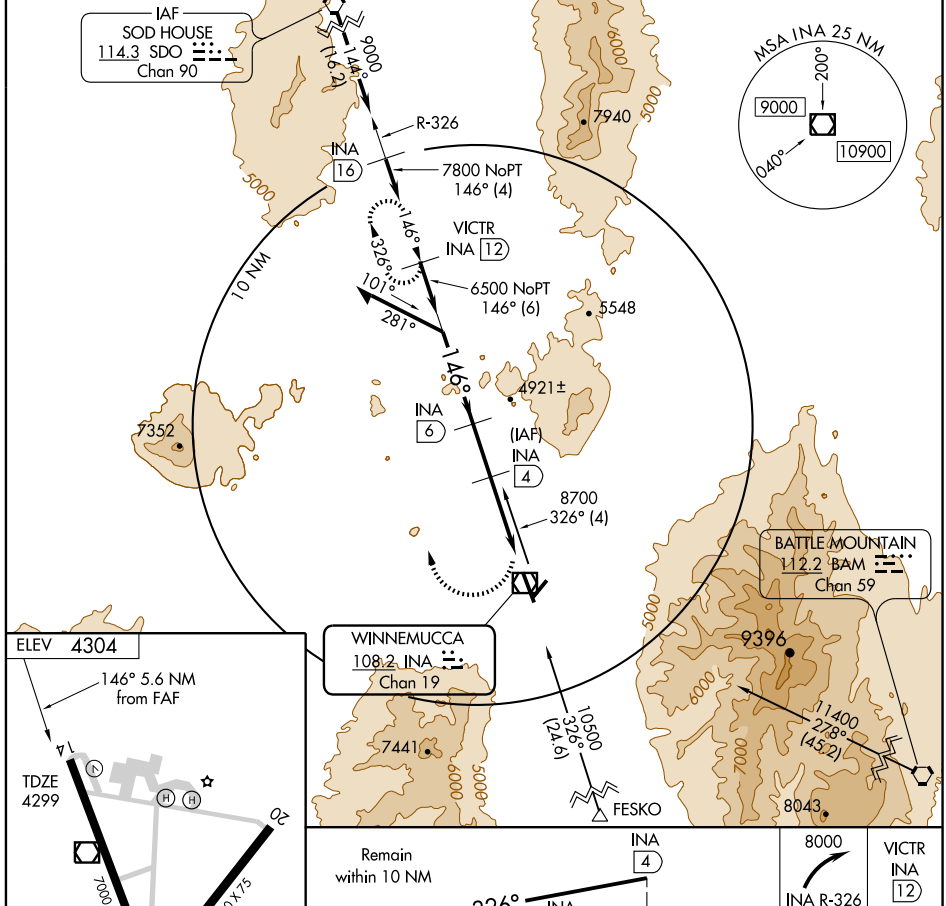
VOR/DME INA 108.2 Chan 19	APP CRS 146°	Rwy ldg 7000 TDZE 4299 Apt Elev 4304

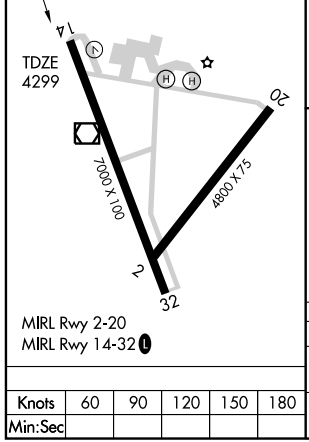
VOR/DME RWY 14
WINNEMUCCA MUNI (WMC)

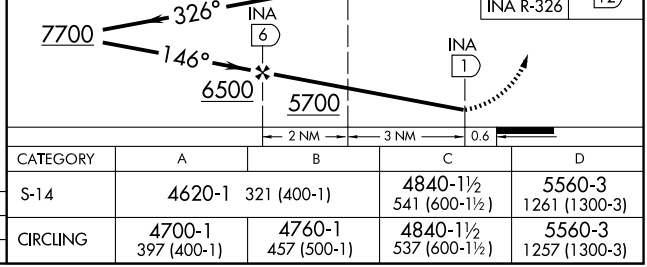
ACTIVATE MIRL Rwy 14-32-CTAF.

MISSED APPROACH: Climbing right turn to 8000 via INA R-326 to VICTR DME Fix and hold.

ASOS	SALT LAKE CITY CENTER	UNICOM
120.175	132.25 380.05	122.8 (CTAF) L







Knots	60	90	120	150	180
Min:Sec					

CATEGORY	A	B	C	D
S-14	4620-1 321 (400-1)		4840-1½ 541 (600-1½)	5560-3 1261 (1300-3)
CIRCLING	4700-1 397 (400-1)	4760-1 457 (500-1)	4840-1½ 537 (600-1½)	5560-3 1257 (1300-3)

SW-4, 14 JAN 2010 to 11 FEB 2010